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Editorial: "LUCIFER"
THE EDITOR'S UNEASY CHAIR

HIGHER EDUCATION IN CANADA

The Canadian Universities ..... J. H. Stewart Reid
Canadian Association of University Teachers

Trends in Canadian Higher Education ..... Murray G. Ross
York University

The Next Fifty ..... J. W. T. Spinks
University of Saskatchewan

CLASSROOM AND CURRICULUM

The Secret Profession ..... T. H. Matthews
National Conference of Canadian Universities and Colleges

Inspection ..... F. M. Salter
University of Alberta

New Dimensions in the Arts and Science Curriculum ..... J. F. Leddy
University of Saskatchewan

In Praise of Specialization ..... F. Kenneth Hare
McGill University

Integrating Testing and Teaching ..... William W. Lucow
University of Manitoba

Revamping My Teaching ..... Ailsa E. McEachran
University of British Columbia

PROBLEM STUDENTS

"Unskilled Laborers" ..... George W. Joly
McGill University

Do Our Students Want to Learn? ..... Robert N. Smith
University of British Columbia

Freshman Success: A College Responsibility ..... Miles Wisenthal
McGill University

Fifty New Books
Special Reviews by E. D. Duryea,
J. K. Munford, Ordway Tead

Improving College and University Teaching

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WRITTEN BY COLLEGE TEACHERS

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The Editor's Uneasy Chair

The highway of higher education is a noble course and fortunate are they who travel it. Unhappily many young people of capacity and promise never get to college. There are reasons: lack of desire, fear of failure, a wish to do something else, obligation to do something else, lack of money. The colleges themselves set up barriers intended to keep out the unfit. Inescapably they also keep out many of the fit. A registrar working on criteria of admissions found that any device or test that might be adopted for screening applicants would, if it had been adopted earlier, have excluded from college some students who successfully graduated.

Waste along the wayside

As the academic procession moves on its way, able unmatriculated young people remain as waste along the wayside.

Then on the course itself waste abounds. Just now, while we are giving belated attention to superior students, we need to guard against a subtle waste. Society needs its gifted. So do campuses. Segregation of the gifted, often advocated and practiced, has value but involves a kind of waste we had better try to avoid.

The gifted make two notable contributions to a campus. (1) When they are part of regular classes they are a stimulus to the less able. If a teacher wishes to use them they may actually aid the learning of other students, incidentally in such process having some valuable experience themselves. (2) Where the gifted are segregated, teachers who handle gifted groups report that they afterward tend to demand more of their ordinary students. There is a transfered benefit. In view of the fact that great numbers of students undoubtedly operate below their capacity this should be a great gain.

Unfortunately when a whole campus is made up of superior students, as is true of colleges practicing highly selective admission, there are no available beneficiaries of either direct or indirect transfer from the superior to the less able. There is an obvious waste, though conceivably it is balanced by gains in other ways.

From the editor's chair the mighty company of the elite in colorful procession is a thrilling spectacle. But it is sad to think that many never march who ought to and many who do march benefit less than they might. DMG

Editorial—

Lucifer

A TEACHER brings to students the light of truth. As a scholar in his field he possesses a segment of universal knowledge which he has entered into both broadly and deeply. His competence as a scholar in his field is regarded as his chief credential as a teacher.

Such credential is logical. A teacher must have something to impart. Yet if the imparting of knowledge were his primary or sole function, the college or university teacher, in this modern time of abundant books and communications media in bewildering variety, might bow himself out or even be pushed out. Is there, however, something more which, we may say with confidence, will keep teachers on the job even if books, teaching machines, and supplements as yet unheard of, proliferate?

Lucifer

1 The morning star; the planet Venus when she appears in the sky before sunrise. . . .

2 The rebel archangel whose fall from heaven was supposed to be referred to in Isa. xiv, 12; Satan, the Devil. . . .

3 (Orig. lucifer match) A friction match made usually of a splint of wood tipped with an inflammable substance ignited on a prepared surface.

OXFORD UNIVERSAL ENGLISH DICTIONARY

Yes, indeed. A scholar who teaches has functions and purposes that go beyond his subject. His subject is not an end in itself but a means to an end, and that end is the activating of students as learners through the stimulation and nurture that the subject, disclosed and interpreted by the teacher, can provide. He must interpret his subject so as to give it meaning to his students. They need not only to study it with interest but to build it into their intellectual, emotional, and volitional being.

Hence can we not think of the teacher as bearing into his classroom a lamp of knowledge, namely his subject, through which life in general and the individual lives of students may be illuminated?

Viewing teachers as light bringers can reveal the deeper aspects of teaching-learning. Teachers can be low level or high level light bringers. Some teachers know their subject only second hand. They have mastered it with parrotlike competence and they know every fact and formula; their knowledge may be impressive but if this is their level, they will never be inspirational. Other teachers who, in contrast, have felt the fire of discovery, have often been close to the growing edge of their subject, have vicariously experienced the labors of those who are advancing it, and perhaps have themselves been at the front of the advancement, can hardly fail to bring into their classrooms, along with the lamp they bear, a contagious interest and inspiration.

The light is not enough in itself. "The gift without the giver is bare." The teacher bearing the light of truth needs to be a worthy bearer.

Pythagoras, Confucius, Socrates, Aquinas, Agassiz, Hopkins, and Phelps still radiate unquenchable light. Hosts of teachers, their names unknown, live immortal in the cultural heritage of all of us.

It is unfortunate that through error the name Lucifer ("light bringer") came to be applied to Satan. Only negatively, as darkness makes light seem brighter, has Satan any relation to light. The sublimation in *The Golden Legend*—"since God suffers him to be, he too is God's minister, and labors for some good by us not understood"—hardly takes away the diabolical stigma of the name Lucifer. Yet the name has important significance in other meanings. "Light bringer" admirably describes the teacher. Lucifer also means the morning star. It means a match. This last is humble indeed. Yet would not any of us be privileged if, as it were striking a match, we might spark the incalculable potential of even one of our students? DMG

The Canadian Universities

Canadian Universities represent a great diversity in origin, pattern of program, and age. One traces its history from the days of New France; another enrolled its first classes September, 1960. The Executive Secretary of the Canadian Association of University Teachers describes the Canadian Universities as they have developed from their beginnings to the present.

By J. H. STEWART REID

ANYONE familiar with the organization and the practices in universities in the United States would find himself quite at home in almost any one of the Canadian universities or colleges. Clearly the founding fathers of Canadian universities looked to the great institutions in the United States for their models. It is true that the influence of Oxford and Cambridge can be seen in the curricula of many of them—in the provision, for example, of a separate and more demanding honors program. But the organization, the administration, and the government of most Canadian universities resemble Harvard or Minnesota or California rather than any English or Scottish institution. The departments organized into faculties, the professional schools, the institutes, and the schools for special studies, all follow the American pattern. Canadian universities are practically all, as in the United States, under the direction of Boards of Governors, composed almost always of nonacademic people. Practically all of them, as in the United States, are becoming more and more dependent upon public authorities for their funds.

Only in the Province of Quebec does the above generalization not hold true. The French Canadian universities are patterned after the French system rather than that of the United States or of Great Britain. Basically, the French Canadian system operates through some fifty collèges classiques, in each of which the first four years of instruction are at secondary school level and the last four years are at a college level. These latter years of study are upon a program somewhat similar to that of the faculty of arts in a university or college. The curriculum includes French and English and Latin and Greek as well. Mathematics and science are common to all, and all of them provide two years of study of Thomistic philosophy. When the student graduates with a B.A. from one of the collèges classiques he has had no academic specialization. This he receives in what are really graduate universities—those of Laval and Montreal. A few students bypass the collèges classiques and enter the science faculties of the two great French Canadian universities direct from grade XI of the provincial secondary schools, but the system of the collèges classiques is still the typical system in the Province of Quebec.

Elsewhere in Canada the picture looks very much like that in the United States. There are fewer universities in Canada. At the moment some thirty-two are counted as members of the National Conference of Canadian Universities and Colleges. The Canadian universities are, however, just as diverse in structure, size, and character as are American universities. Some are, for this continent, old institutions. Laval University for example, officially founded in 1852, is the direct inheritor of the traditions of the Collège des Jesuites and the Seminaire de Quebec, established respectively in 1635 and 1663. The first English college was King's College founded in 1787 at Fredericton, and later became the University of New Brunswick. Some of the Canadian universities are very new. One of the latest of the to-be big universities, York University, enrolled its first classes only in September 1960. There is a tremendous diversity in size as well. Canadian universities range all the way from St. Dunstan's in Prince Edward Island or St. Joseph's in Nova Scotia, both of which have approximately 300 students, to the University of Toronto which enrolls some 7,000 in its faculty of arts alone. There is every kind of structure as well. Canadian universities range all the way from a single unitary institution such as Bishop's University in Lennoxville, Quebec, to a very complex institution such as that of the University of Toronto, which is in reality a federation of institutions. It has ten faculties of its own plus ten schools or institutes for special studies. It includes a federation of arts colleges, one of which is itself a university, a federation

of theological colleges, a group of affiliated colleges, a museum, a conservatory of music, and teaching establishments in five of the large hospitals of the city of Toronto.

Under the Canadian constitution, education is a matter which lies exclusively within the jurisdiction of the several provinces of Canada. There is thus no national ministry or department of education. Nevertheless the federal government is very vitally interested in education in Canada. The grants which it now makes to the Canadian Universities constitute an important and rapidly growing part of the revenues upon which they depend. Until 1959 the question of federal grants was a source of dispute between the province of Quebec and the Federal Government, and the Quebec universities would not, or could not, accept the grants from the Federal Government. One of the last acts of the Union Nationale government in the Province of Quebec before its election defeat in 1960, was to conclude an agreement with Federal Government through which federal grants are now available to Quebec universities.

Old Tower
L'Université Laval
Dating from the time of New France

There are several institutions in Canada that have no counterparts in the United States. One of these is the Canada Council, founded in 1957. This Council receives funds from the Government of Canada, and uses them not only to make capital grants to universities to assist in the erection of new buildings, but also to provide funds for the actual administrative costs of universities, as well as to maintain a rather elaborate system of university scholarships in arts, the humanities, and the social sciences. Another institution that has no counterpart in the United States is the annual Conference of the Learned Societies in Canada. Each year in June the Royal Society of Canada meets and that meeting is followed by the meetings of the societies of historians, economists, geographers, philosophers, physicists, and of all other professional organizations of many kinds. This annual "hiving of the academics" in Canada is a most interesting phenomenon.

Canadian university teachers have their professional organization like that of the American Association of University Professors. The Canadian Association of University Teachers enrolls about 80% to 85% of the teaching staff of the Canadian universities and colleges. In its function it differs somewhat from that of the American association. In the first place, C.A.U.T. exists as a federation of local campus associations. In the second place, its chief concern to date has been with economic status of the profession and with purely professional problems, rather than with the protection of academic freedom and tenure. In fact, it has had as yet to deal with only one case of alleged violation of academic freedom and tenure. In this case, the much talked about "Crowe case" at United College in Winnipeg in 1958, prompt action of the Association plus an aroused public opinion, forced a retraction by the offending college.

The problems which face Canadian universities are very much the same problems which face American institutions. At the moment the most pressing is that presented by an enrollment which threatens to double in the decade of 1955-1965. It has been estimated that during that decade Canadian universities will have to find some $314,000,000 for the construction of new buildings. It has also been estimated that they will have to increase their staffs by approximately 60% during that same time. This means, of course that the problem of recruitment is with us now. There is no easily apparent solution to this problem. Recent publicity in both Canadian and American newspapers has suggested that teaching conditions and salary structures in Canadian univerities have become so attractive that something in the nature of a tidal wave of professors from the United States will soon be hitting Canadian universities. There is no actual basis for any such fantasy. Indeed, it is quite clear that salaries and teaching conditions and research opportunities at Canadian universities are still not as attractive as they are at *comparable* institutions in the United States, although it is true that they are improving each year. For a variety of reasons, of course, there has always been a considerable interchange of both students and teachers between Canadian institutions and those in the United States. Such interchange has been of great value to both.

Trends in Canadian Higher Education

Canadian universities are described as in a period of ferment by the President of Canada's new university (B.A., Toronto; M.A., Chicago; Ph.D., Columbia; D.C.L., Acadia) who has held a UNESCO fellowship in Europe and Israel, was a NATO delegate, and has studied education in U.S.S.R. and the People's Republic of China. Also vice president of the University of Toronto, sociologist, and president of the Canadian Institute of Public Affairs, he is author of seven books and many articles.

By MURRAY G. ROSS

THE "explosion of numbers," with which educators throughout the world are presently concerned, is very much in evidence in Canada. It is a result of a rapidly expanding population in which an increasing percentage of youth wish to continue their education through secondary school and university. A higher proportion of this population, which is increasing at an accelerated pace, now crowds schools and universities in this country. The future promises only to accentuate the present in this respect.

Something of the quantitative changes in Canadian education is indicated by the accompanying table.[1]

As indicated above, enrollment in recent years in public schools has been increasing at a rate of approximately 4%, in secondary schools at a rate of 9%, and in universities at a rate of 10%. The cumulative result of such steady increases is evident when enrollment in 1958-59 is compared with that of 1945-46: public school enrollment has increased by about 150%, secondary school enrollment by 96%, and university enrollment by 40%. The number of teachers has risen at a comparable rate, and expenditure for education has in recent years passed the one billion dollar mark. All projections indicate a continued increase in all these areas, with perhaps the most radical growth projected for university enrollment. It is estimated that by 1970 university enrollment in Canada will be 229,000,[2] or more than 140% greater than in 1958-59.

The precise pattern of university development to care for this growth is not yet clear, but some evidence of change is emerging. While most universities will expand facilities to provide for additional enrollment, few will double present enrollment on their present campuses; but federated, affiliated, or branch colleges and universities are being organized or developed. The University of British Columbia has a branch in Victoria; University of Alberta, in Calgary; University of Saskatchewan, in Regina; University of Manitoba, in Brandon; St. Francis Xavier University, in Sydney; and the University of Toronto has provided for the affiliation of York University in Toronto. The predictable development seems to be larger central universities with one or more affiliated universities nearby. But the percentage increase of enrollment in these branches undoubtedly will be far greater than that on the central

	1945–46	*1956–57*	*1957–58*	*1958–59*
1. Public school grades enrollment	1,185,704	2,720,271	2,842,746	2,956,000*
2. Secondary school enrollment	326,320	534,371	588,558	641,000*
3. Private school enrollment:				
(a) Quebec	67,751	69,440†	63,935†	67,000*
(b) Elsewhere in Canada	40,158	61,018	67,773	74,000*
4. Full-time university grade enrollment	63,550	78,100*	86,500*	94,400*
(a) Arts and Pure Sciences	31,229	33,000*	38,000	43,000
(b) Others (full time and part time)	61,212	88,000	98,000*	108,000*
5. Number of teachers in public and private schools: full time	79,777	132,108	137,748	142,000*
6. Number of University teachers: full time	4,503	6,950*	7,400*	7,900*
7. Total expenditure on education	$195M	$955M	$1,014M*	$1,137M*

* Estimate.
† Irregularities due to reclassification of Quebec private schools.

[1] Prepared by the Educational Division of the Dominion Bureau of Statistics.

[2] This estimate is made on the basis of data supplied by the Research Division of the Canadian Universities Foundation, Ottawa, 1959.

campus over the next twenty year period. Waterloo University and Laurentian University in Ontario are two new universities which have been founded recently without the formal sponsorship of established universities. It remains to be seen how these independent universities will develop without the rigorous discipline of academic standards imposed by an older institution of higher learning.

A trend which may well encourage the growth of university enrollment but will bring the very best students from high school to university is to be seen in the gradually changing attitude to student financial aid. One indication of this shift in attitude was the public reaction to a report of a study on student aid by a committee at the University of Toronto.[8] This study, released in November 1958, recommended that all first class honor students be relieved of financial obligations by virtue of scholarships sufficient to pay for tuition and bursaries to cover other expenses of such students in financial need; second class honor students, it was recommended, should receive bursaries relative to financial need. To third class honor students, loans, but no awards, were to be available. The significance of the report is that it advocates what approximates free education for all superior students at the college and university level. Canada has tended, on the whole, to follow the pattern of student aid found in the United States, in which students in financial need are expected to make some contribution to the cost of their education, either by part time work during the academic term or by summer work. The University of Toronto plan approximates the British pattern, in which high scholastic standards are supported by liberal scholarships provided by local and national governments. It states, in effect, that all financial barriers should be removed from the path of the most intelligent and productive students and that all possible must be done by the public and the universities to nourish the talents and capacities of such students. The public reaction, as judged by the press, was overwhelmingly in favor of the main thesis of the report. There were some who would extend such student aid to all who were eligible to enter university, but there were few, if any, who advocated less than the Toronto report. Provincial Governments in British Columbia, Alberta, Quebec, and Ontario introduced plans of student aid which, while they were more limited and varied in their terms and conditions, were nonetheless consistent with the policy advocated by the Toronto report. If such policies of student aid do become prevalent in this decade, a milestone will have been reached in Canadian education, marking a turning point towards the removal of economic barriers to university education and a policy of opportunity for higher education based exclusively on intellectual achievement.

While precise figures are not available to the writer at the moment, it seems clear that there has been a steady trend towards undergraduate specialization in university and away from general and liberal education. This is seen in two rather different developments. It can be seen in the increasing number of university professional schools and faculties, many of which (such as architecture, pharmacy, engineering, business) admit students upon graduation from secondary schools. While such professional schools usually do provide a few liberal arts subjects, not even the most sanguine educator would claim that students receive a solid liberal education as part of their professional training. The trend is seen also in the growing popularity of honors (or specialized) courses among undergraduates, as opposed to broad, general programs of study. The honors courses are somewhat similar to the specialized programs at Oxford and Cambridge which have strong support, and with good reason, in Canada. Many of the outstanding scholars in Canada are products of such programs of study, and few would deny their value. But it is clear that while general and liberal education, as a prerequisite of specialized study, is receiving increased attention in the leading universities in the United States,

[8] *Towards a Policy of Student Aid*, Report of the President's Advisory Committee on Student Aid, University of Toronto, 1958.

Ferment

This is a period of ferment for Canadian universities. Physical expansion often requires a rethinking of purpose, function, direction. Further, physical expansion often requires justification to those who provide the money for expansion. And while Canadian universities are strongly rooted in the European tradition, there is a new awareness of the unique milieu in which Canadian universities exist and of the special demands of the Canadian environment.

ASSUMPTION UNIVERSITY LIBRARY

the same trend cannot be said to exist in Canada.

A major development in higher education in Canada has been the gradual increase in the number of institutions offering work at the graduate level. In the 1944-45 academic year, seventeen universities provided work at the master's level and five at the doctoral level; in the 1958-59 academic year, twenty-eight offered work at the master's level and sixteen at the doctoral level. This development (probably) represents the gradual building of departments of substance with a sufficient number of specialists in each to provide for the training in breadth and depth necessary in graduate education, and therefore suggests the maturation of universities in Canada.

This is a period of ferment for Canadian universities. Physical expansion often requires a rethinking of purpose, function, direction. Further, physical expansion often requires justification to those who provide the money for expansion. And while Canadian universities are strongly rooted in the European tradition, there is a new awareness of the unique milieu in which Canadian universities exist and of the special demands of the Canadian environment. Changes in organization, content, and method will undoubtedly accompany the inevitable rapid physical development of Canadian universities.

The Vision of Poets

"And it is one of the incalculable influences of poetry that each new revelation is an education of the eye and the feelings. We learn to see and feel Nature in a far clearer and profounder way, now that we have been taught to look by poets. The incurious, unimpassioned gaze of the Alpine peasant on the scenes which mysteriously and profoundly affect the cultivated tourist, is the gaze of one who has never been taught to look. The greater sensibility of educated Europeans to influences which left even the poetic Greeks unmoved, is due to the directing vision of successive poets."

GEORGE HENRY LEWES
The Principles of Success
in Literature
1885

The Next Fifty

The University of Saskatchewan, installing its fourth president last January, was looking at both its first fifty years and its next fifty. The following forward looking article is taken from the address on that occasion by the new President (Ph.D., Sc.D., London), internationally distinguished as teacher and researcher, particularly in tracer chemistry, fundamental and applied; operational research officer in the Royal Canadian Air Force during World War II; author of one hundred and fifty scientific papers and larger publications; twice delegate to Geneva Conference on the Peaceful Uses of Atomic Energy; co-discoverer with W. E. Gordon of nitroxyl perchlorate.

By J. W. T. SPINKS

DURING OUR lifetime, and more particularly in the last two or three decades, extraordinary developments have taken place in the technical, scientific, political, and social fields. As examples of the former, I need only refer to radio and radar, jets, rockets and sputniks, penicillin, and atomic submarines. What happens 10,000 miles away is quickly reported by radio and may even be flashed upon our television screens. It has its immediate effect on the price of uranium, oil, and wheat, and might equally send an intercontinental missile winging its murderous way to trigger off a nuclear holocaust.

In the political field, I might remind you that a number of colonial nations have thrown off the imperial yoke to find a somewhat heady freedom, empires have dissolved, nations have become enslaved, revolts against tyranny have failed. On this continent one no longer bows the knee to Keynes. The "affluent society" is here, and we worship instead tail fins and TV with security from the cradle to the grave.

And in our own Province we have changed from an economy depending almost entirely on agriculture to one which depends, to an increasing extent, on minerals and secondary industries.

Thus the education of the citizen of tomorrow must fit him to live in a Canada that is part and parcel of a world which is physically in the process of becoming "one world" and which is characterized by change and uncertainty.

What factors should characterize education in the world of change? Your answer to this question will depend markedly on your basic philosophy of education—whether you incline to the view that the individual is of supreme importance, whether you think the state is of supreme importance, or whether you think that some nice mixture of these two with perhaps a dash of a third or fourth interest would be better.

Actually, any system requires that certain fundamental aims of a good education be met. First of all, university education should concern itself with fundamental principles rather than the professional tricks of the trade, since in a world that is changing so rapidly, the latter will soon be out of date. Next, the physical and mental capacities of the student must be developed; he must learn how to communicate with others through speech and writing; he must acquire some knowledge of mathematics and science, of the physical world in which he lives, of the people with whom he lives, and of the society in which he moves.

If you think the individual to be of supreme importance, you can let him go his own gait, and trust that everything will come out all right in this best of all possible worlds. Unfortunately for this attitude, however, it happens that we live in a world divided into sovereign states, states that have different political ideologies, states with widely different standards of living, states with widely differing standards. Thus, if we are to survive as a nation in this wicked world, we must pay some attention to the needs of the state. What are its needs?

BRIEFLY put, the state requires a large number of people with a general liberal education, and an equally large number of people with professional education—doctors, lawyers, engineers, scientists, nurses, agriculturalists, economists, journalists, librarians. These people are essential to the smooth running of our hospitals, courts, and industrial concerns. We also require people with advanced training to staff our research organizations and universities. The university has long since left its ivory tower and now spends a good deal of its energies on the training of these

same professional people and these future research workers.

As President W. P. Thompson said in one of his addresses: "The great majority of students come to university in order to learn a profession by which they can earn a living. [It is] not an unworthy task for universities to train competent and skilled doctors, lawyers, engineers, and scientists. That kind of teaching may not lend itself to high sounding speeches, but it is essential to the welfare of the nation."

Actually, of course, this acceptance of the training of entrants to the professions as a proper university function is really nothing new. The continental European universities centuries ago had the three professional schools of Law, Medicine, and Theology. In England, scholars at the colleges of Oxford and Cambridge were trained for positions in and around the Court. One of the reasons why the colleges expanded in those early days was that such people were required as secretaries, scribes, notaries, and teachers. The apparent change in emphasis today has resulted from the fact that whereas in the past practically all scholars were classical scholars, now many are in the sciences. Those among you who still lament the change must take comfort in a quotation from the late Dr. Wallace of Queen's: "For the majority of university people, however, this part of the argument about professional studies has been settled; they should be kept on the campus for the civilizing influence which the Arts may exert on them."

What is needed, then, is a nice blending of the two extreme philosophies to the end that the individual may be given an opportunity to develop his individuality to the fullest in a world presently consisting of competing and often antagonistic states.

WITHIN THE LAST forty years, the functions of universities have changed markedly. Whereas at the beginning of the century they were, in the main, content to store knowledge and impart it to their students, they are now actively engaged in enlarging the bounds of knowledge, partly through the efforts of their scholars, partly by their students, and partly by researchers working in research institutes housed on the campus. It is noteworthy that the early presidential reports of Dr. Murray contained no reference to research, but that as time went on increasing emphasis was placed on its importance in the university. Within this same period, Canada has changed from a country doing practically no research to one with a very respectable research effort, not only in the universities but also in government and industry. I think that it is important to stress that this did not happen just by chance. When the National Research Council was set up in 1916, it found an almost complete lack of research workers. It set about to remedy this situation by providing scholarships and grants in aid of research. It took thirty years, a lot of money, and a great deal of foresight and energy to carry through this program. It is of considerable interest, too, that within the last few years the Province of Saskatchewan has established its own Provincial Research Council and its own Provincial Research Laboratory on the University campus.

Naturally, there was a good reason for this type of development on both the national and provincial scale, namely, the change from an economy largely dependent on primary products to one depending a good deal on industry.

That research has to be done in a country is, of course, no reason in itself why this should be done in universities, but it has been pointed out on numerous occasions that the university atmosphere seems particularly conducive to doing good basic or fundamental research. Furthermore, it has often been claimed that "good teaching and good reasearch are likely to be associated and each reacts favorably on the other."

Ashby, for example, says: "Universities are traditionally places where research is to be found . . . (but) . . . this is a very minor reason for requiring university teachers to advance knowledge. The main and compelling reason is that they cannot do the sort of teaching which is required of them unless they are advancing knowledge . . . advanced work has to be done in the front line of scholarship; a student has to be led up to the 'no-man's land' between what is known and what is unknown. . . . Now the only kind of teacher who can be trusted to lead students to the frontier between the known and the unknown is a man who himself spends many of his thinking hours at that frontier. . . . Only at the frontiers can man discern the anatomy of scholarship."

Hitherto, the great bulk of our research has been in the sciences, although there have been, from time to time, outstanding scholars in the humanities and social sciences. It is expected that, with the added stimulus provided by the

Canada Council, there will be a greatly increased scholarly effort on the part of the humanities. And I am not suggesting here that the humanities should merely jump on the scientific bandwagon, but rather that they should develop according to the laws of their own nature. The humanities have their own valid and healthy traditions which were ancient when science was an infant, and they must obey their own laws rather than the laws of the laboratory. Thus "research" in the humanities will not usually be "research" in the usual scientific sense but rather "creative work" or "original studies."

Research at the university is closely linked to graduate work, and during the last few years we have seen a great expansion in work at the graduate level, first at the masters' level and then, after a college of graduate studies had been established, at the Ph.D. level. To date Ph.D. work has been largely in the fundamental sciences, but a healthy start is now being made in the applied sciences, such as engineering, and it is hoped that Ph.D. studies will shortly take place in the humanities, assisted as they now are by the Canada Council. A considerable expansion of graduate and research work in the colleges of commerce and law is also to be expected. There is no doubt that a good graduate school is taken nowadays to be the hallmark of a first class modern institution. Without it, it is impossible to attract and hold good staff, or to fulfill one's obligations to the community.

The last few years have seen the establishment of a number of research institutes on the campus, the Prairie Regional Laboratory, The Saskatchewan Research Council, The Science Services Laboratory of the Department of Agriculture, the Soil Science Laboratory, the Cancer and Medical Research Institute, the Center for Community Studies, and the Institute for Upper Atmosphere Research. The degree of autonomy varies very widely, from almost complete independence to almost complete integration within the University. The time is not too far distant when there may be a still greater number of such institutes on the campus, each grouped about a nucleus of active research workers, either within a single department or college, or having a multidisciplinary approach.

Two additional institutes or centers for advanced study which have recently been under consideration are: (a) a Neurological Institute, and (b) an Institute for Northern Studies. In the one, a number of disciplines—medicine, biology, chemistry, physics, engineering, history, philosophy, language, education, etc.—are grouped about a single object, the brain, and the recent symposium held at this University will have indicated the spectacular advances that may be expected to result from such an approach. In the other, a number of disciplines make a study of an area such as Northern Saskatchewan, and equally fruitful and rewarding studies might be expected.

Such institutes have the further advantage of helping to bridge, in a positive way, the gap between the sciences and the humanities.

IT HAS BEEN said we are living in the middle of two cultures which have scarcely any contact at all—the traditional nonscientific culture, and an up and coming scientific one. They are startlingly different, not only in their intellectual approach but even more in their climate of thought. You will all be familiar with the quotation that "scientists know nothing about the humanities and are ashamed of it, while the humanists know nothing about science and are proud of it."

What can we do about this undesirable state of affairs? The answer is a prosaic one: sensible education. Nearly all intelligent people can learn something about science and scientists if they are brought up against them properly. One would not wish to make everyone into a technologist, but it is essential that everyone, including the technologist, should understand something of the intellectual and human meaning of what the technologists and the scientists are about.

So we should try to construct a system of education from which anyone of ability can get enough science not to feel that the scientific experience is alien to him forever.

What Is Not Yet Known

"After some hundreds of years of experience, we think we have learned here at Oxford how to teach what is known. But now with the undeniable upsurge of scientific research, we cannot continue to rely on the mere fact that we have learned to teach what is known. We must learn to teach the best attitude to what is not yet known. This may also take centuries to acquire, but we cannot escape this new challenge nor would we want to."

SHERRINGTON

The wide gap that often exists between the sciences and the humanities has been discussed on many occasions, and various ways of bridging that gap have been proposed. The need to bridge the gap is pointed up by two quotations, one from President MacKenzie of the University of British Columbia: "An understanding of the physical and social sciences is equal in importance for general education to an appreciation of literature and history," and one from the Honorable Vincent Massey: "The world needs philosophic scientists and scientific philosophers. Conflict between science and the humanities is surely a meaningless strife. If true to itself, science must confer many of the blessings which the humanities themselves transmit to those who follow them."

Actually what is needed is not an artificial bridging of the gap but a positive linking, such as occurs within the humanities themselves, e.g., while the artists paint paintings, the historians delve into the history of art, the philosophers develop theories of aesthetics, the psychologists study the psychology of art, and so on. We badly need corresponding studies for science and its manifold relationship to society.

How can science be most fruitfully applied to the positive goals of our society? How do we identify the full array of policy issues raised by the spectacular scientific advances of recent years?

No more than two decades ago most people would have agreed that the world of science and the world of public policy were about as far apart as two worlds could be. Today the two worlds are in constant and frightening contact. But they have not been in contact long enough to permit an adequate clarification of the really fundamental issues governing their relationship. The relationship has developed so abruptly and the men most intimately involved have been driven so tumultuously by events of the moment, that exploration of the deeper issues has not been attempted. This surely would be an active and challenging field for the humanities.

So the University of Tomorrow must be characterized by its adaptability—adaptability to a world of change. As before, a large part of our effort will be expended on undergraduates, leading them into the world of scholarship, helping them to find direction and purpose for their careers. This, in itself, presents a major challenge. To quote Sherrington of Oxford: "After some hundreds of years of experience, we think we have learned here in Oxford how to teach what is known. But now with the undeniable upsurge of scientific research, we cannot continue to rely on the mere fact that we have learned to teach what is known. We must learn to teach the best attitude to what is not yet known. This may also take centuries to acquire, but we cannot escape this new challenge nor would we want to."

An increasingly important part of our effort will be expended on graduate students and research, commensurate with our advance in stature as a senior institution of learning. And the growing complexity of the economic life of the Province, and indeed of Canada as a whole, together with the widening range of needs and interests of its peoples, will give to the University a new kind of responsibility to the community. This responsibility will not be met by the routine grinding of more and more B.A.'s and B.Sc.'s, but rather by the activity of intellects pushing into the unknown, an activity marked by freshness, excitement, beauty, and growing power. This activity of intellects will not be achieved if we conceive democracy as an invitation to share a common mediocrity, but only if we regard it as a system which allows each to express and live up to the special excellence that is in him. As Captain Cook said: "I had ambition not only to go *farther* than any man had ever been before but as far as it was possible for man to go." These aims are in full accord with those expressed some fifty years ago by Dr. Walter C. Murray: "We should have a University that will leave no calling, no sphere of life untouched, a university that is as broad in sympathy as these wide plains, as deep in richness as this marvellous soil, and as stimulating in spirit as the breezes which sweep over our fields."

As we pass from the first fifty years of University existence to the next fifty, we are reminded of the speaker in Ecclesiastes: "To everything there is a season and a time to every purpose under heaven; a time to be born and a time to die; a time to plant and a time to pluck that which is planted." Universities have their own peculiar calendar. There is a time to plant, a time to wait, and a time to harvest. A good seed has been sown on the broad Prairies and carefully nurtured. Who can doubt that with God's grace the harvest will be plentiful.

The Secret Profession

That the art of teaching is too often an unmentionable is pointed out by the executive director of the Canadian Universities Foundation (M.A., LL.D., Oxford), a veteran leader in Canadian higher education, former mathematics professor and registrar at McGill University, who served in the Royal Navy in World War I. He has directed two summer schools for university teachers.

By T. H. MATTHEWS

A LONG TIME AGO I was for twelve consecutive years a university teacher. During that period I never heard a colleague giving one of his regular lectures to a university class, although I might obviously have learned a great deal about the art of teaching from many of them. On the other hand, I never asked or thought of asking a colleague to come and hear one of my lectures. My students were too polite, of course, to tell me of my weaknesses, and so I went on year after year repeating my sins. Hundreds of other university teachers are undoubtedly doing the same. University teaching might be called the hidden profession. It is practiced as a secret rite behind closed doors and not mentioned in polite academic society.

If you ask a professor of physics what his profession may be, he will probably say "I'm a physicist." When he writes a scientific article which appears in some learned journal, he sends reprints to his colleagues and friends because he likes them to know that he is a good physicist, but apparently he does not care whether they know that he is also a good teacher. In any faculty club you will frequently hear a group of experts arguing about their subject, but almost never will you catch them arguing about the best way of teaching it.

This narrow view of themselves as scholars is, of course, encouraged by university presidents who are so frequently and so thoughtlessly telling their audiences that "a university is a community of scholars," suggesting that it closely resembles a Tibetan monastery, which they know it does not. Why do they not talk about "a community of scholarly teachers"? This would at least shift the emphasis toward the essential work that most university professors are paid to do.

Again the presidents say, this time to more academic audiences, that they value good teaching as highly as original research. This is generally not true, and they know it. I do not, however, blame them, for how can they tell which of their staff are good teachers and which are not if all the teaching is done in secret behind closed doors? I have known the reputation of a man as a good teacher established on the strength of a benovelent remark made by a cheerful alumnus at a cocktail party.

The difficulty is to get the physicists, the historians, the philosophers, and all the others to think of themselves as essentially teachers who take their expert knowledge of their subjects for granted as a necessary qualification for the high profession of university teaching. So long as the professor of chemistry says "I am a chemist" the question will be "how good a chemist is he?" When he says "I am a teacher of chemistry," then the question may become "how good a teacher of chemistry is he?" and good teaching may then begin to reap its richly deserved rewards.

If members of the academic teaching profession take a more professional attitude toward their teaching, if they discuss the art and its techniques freely and invite others to criticize their own work, then the quality of university teaching as a whole will rise, and that would help toward solving a number of vexing university problems.

Induction and Deduction

"A growing thought requires the inductive exposition, and applied thought the deductive."

GEORGE HENRY LEWES
The Principles of Success
in Literature
1885

Inspection

The dignity and integrity of a scholar require that he be protected from outside interference. Any invasion of his classroom for inspection or supervision is often regarded as undesirable and actual violation of academic freedom. Nevertheless visitation of classrooms of less experienced colleagues can be helpful to them and sometimes to the one who visits. A professor who has resisted and would still resist interference with his teaching here proposes a plan of "inspection" which he believes would enrich the instructional programs of colleges and universities.

By F. M. SALTER

I HAVE BEEN "inspected" in the classroom three times in my life. The first time an old soldier who had lost a leg in the Boer War and whose grateful country had found him a sinecure, drove up to my country school in the early afternoon. His visit was unexpected, and he was drunk. In honor of the occasion, I dismissed school at once. Some time later I helped the inspector into his buggy, and have never seen him since. No doubt the Department of Education in that Province still has on file his report that I was a teaching wizard.

My second inspection left me bitter. In the third, several dignitaries suddenly arrived in my classroom in an experimental junior college. I told my class that the originator of our experiment was with us, and that he would tell us his hopes for the "New Plan." It was hardly fair dealing on my part, but I considered wholesale invasion of my classroom and the disruption of my plans for the day to be anything but fair dealing on their part.

My second experience of inspection created resentment that lasted for thirty-eight years. During my first year of university teaching I suffered from severe sinus headaches which were literally blinding. Sometimes at the beginning of a lecture I could not distinguish faces beyond the first row or two, but my vision generally cleared during the hour. "The labor we delight in, physics pain." One day toward the end of the hour I saw the head of my department huddled down in a seat in the last row. I was furious at this affront. I stormed into his office and said, "You will not do that again!" He was a wicked wasp of a man, but he did have sense enough not to provoke further anger. He made no comment on my teaching, and I asked for none.

It *was* an affront. It implied to my students that the university either lacked confidence in me or had appointed a man of whose teaching ability they knew nothing. Moreover, the mere presence of the inspector was an alien element disrupting the established comradeship of teacher and class. Nevertheless, after thirty-eight years I have to admit that the wicked wasp was right in inspecting me, and I was wrong in resenting the inspection. Or perhaps we were both right and both wrong.

The relationship between the head of a department and his subordinates should be pleasant and impersonal. If it is personal, there will almost inevitably be favoritism—or varying degrees of personal warmth. Now inspection by the head introduces a violent immediacy into the relationship between the head and his juniors. The juniors are likely to feel that the inspection was unnecessary, but that the old boy can't help spying.

The head of the department must, nevertheless, be concerned about the merited advancement of his subordinates, and he should feel that his recommendations are honest and based on sound evidence. Many universities place newcomers on probation for two or three years. I have served on committees whose duty was to decide which juniors should become members of the permanent staff, when neither dean, nor head, nor anyone could tell us anything, even by gossip or grapevine, about the teaching ability of this or that candidate. Obviously, if we promote instructors of whom we know nothing, we may be penalizing students for many years to come.

Some deans and heads have met this dilemma by questioning individual students about their instructor. The Golden Rule, to say nothing of ordinary good breeding, condemns this contemptible, and unreliable, prying and spying. Some universities have said, "Instead of asking one or two students about their instructor, let's ask the whole class." They have even devised questionnaires. Apparently, these universities believe that spying is not spying when it is wholesale. Where such a method is in force, the instructor

is powerfully induced to cater to student popularity, and there is probably no other single thing so inimical to good teaching as the desire for popularity. The university whose instructors dare not offend a class has sent good instruction down the drain.

This is not to say that an instructor should be offensive, hostile, or bad tempered toward his class. On the contrary, the atmosphere should always be friendly. But there cannot be friendship where there is fear, even unconscious fear, on one side or the other.

What is needed in every university of any size is a new department, a Department of Teaching and Inspection. It should be the duty of such a department to inspect all instructors of all ranks in all other departments of the university. New instructors might be inspected three or four times in their first year. Members of the permanent staff might be inspected once every two or three years. The inspectors should write reports and send copies to the dean of the faculty, the head of the department, and the instructor. The inspectors should make no reports, verbal or other, of which the instructor fails to receive a copy.

We may kill another bird with this stone. By and large, university instructors are untrained teachers. The Department of Teaching and Inspection should offer a one-hour-a-week course to all beginning instructors. Members of this department should *not* hold degrees in pedagogy. They might well be experienced members of the staff from as many differing disciplines as possible. After all, the young university instructor can be counted upon to possess brains. All he needs is a start. Most of the faults of bad teachers are either unconscious or spring from a wrong attitude of the teacher toward himself, his students, or the university. A mere word from the right person will correct most faults, but it does have to be the right person vested with the proper authority.

A Department of Teaching and Inspection whose members were experienced and kind, offering all instructors in the university the same businesslike and expert criticism and help, and whose purpose was obviously that of enriching the instruction of students and increasing the skill of their instructors would, I believe, very quickly justify itself to administration, staff, and students.

The Nexus Visible

"Philosophy and Art both render the invisible visible by imagination. Where Sense observes two isolated objects, Imagination discloses two related objects. This relation is the nexus visible. We had not seen it before; it is apparent now. Where we should only see a calamity the poet makes us see a tragedy. Where we could only see a sunrise he enables us to see 'Day like a mighty river flowing in.'"

GEORGE HENRY LEWES
The Principles of Success
in Literature
1885

New Dimensions in the Arts and Science Curriculum

The head of the Department of Classics and dean of the College of Arts and Science at the University of Saskatchewan shares with us his findings, under a Carnegie Cooperation Grant, from a study of ten universities and colleges in the United States, commenting on the implications for Canadian higher education. He points out that the swift current of modern history and world political developments has far outgrown our present curricular arrangements. Educated at Saskatchewan (B.A., M.A.), Chicago, and Oxford (B. Litt., D. Phil.), he holds honorary degrees from five Canadian universities and has been an active member or delegate in various national and international bodies.

By J. F. LEDDY

In 1953-54, under a grant from the Carnegie Corporation, I had the opportunity of visiting ten representative universities and colleges in the western States and a similar number in the eastern States. In visiting these institutions I spent much time in talking to members of the staff and of the administration about their views with respect to a revision of the curriculum in the college of arts and science. More precisely I directed my enquiries to curricular matters in the first two years.

Naturally I encountered familiar arguments about the proper balance between "distribution" and "concentration," which we also debate in Canada. There were the usual experiments in the way of introductory courses, survey courses, and special combinations in the social sciences and in the humanities. There were interesting examples of efforts to give an exposition of the main themes of cultural development.

Some of these novelties were prompted by the initiative of new deans or presidents or sometimes of committees of younger men impatient with a too static or traditional curriculum. Many of these courses could properly be described as local variants of pioneer courses at Columbia and Chicago or as modifications of the "Great Books" experiment.

A sympathetic observer could note with satisfaction the zeal and energy of the instructors who were determined to secure maximum value from such courses for their students. I was inclined to feel that in such matters American educators are generally more receptive to new ideas and readier to experiment than their Canadian colleagues. Yet many of these curricular devices appeared to promise more than they were likely to deliver, educationally. And in a few cases they seemed to be rather artificial and to have been inspired more by an eagerness to be different than by a reasonable expectation that the new program would in reality be much sounder educationally than the curriculum which it replaced.

On nearly every campus the visitor was soon made aware that there was a considerable opposition party critical of the new program and determined on some early opportunity to modify it in various directions. It was observable that most scientists preferred the traditional presentation of their subjects at the elementary level, and that, at the other end of the scale, the humanists who devised literary courses in the classics or in European literatures in translation were well satisfied with their innovations. Many social scientists appeared to find combination courses particularly challenging, and for a few years at least the younger men participating in projects of joint instruction were especially keen, even though an inordinate amount of consultation seemed to be required to secure an integrated presentation.

At the time I found these conversations of great interest, and the experience has been one of permanent value to me. However, I am now recalling this experience of seven years ago not so much for the many interesting things which I learned in my discussions with American friends but rather for the omission of the one thing which neither I nor they thought to discuss at the time. It is indeed strange that as recently as seven years ago none of the keen and progressive people to whom I spoke even mentioned as significant the problem which should now greatly concern us, and which I regard as a major issue in 1960. I

refer, of course, to the revision of our programs to include some presentation of the culture and civilizations of the Far East.

It is quite true that in the period directly after the Second World War some important work was done in developing Institutes and in setting up Area Studies, particularly in Slavic studies, but most of these were concerned with senior or graduate work or at any rate appeared to operate most effectively at that level. What I propose to examine in this article is the problem of the further rearrangement of our basic curriculum in arts and sciences in such a way that our college calendars will be pertinent to and not remote from the main themes dominating the editorial and news pages of our daily papers.

We are all agreed that we must know much more not only about Russia but also about India and China. We are chagrined that we have so few specialists in the language and literature, the history, and the philosophy of these countries. We are well aware that it will take time and much effort to increase the number of experts in these fields. It is not my intention to comment further on the importance of ambitious efforts in this direction. Even with considerable success in this respect we will not have enough scholars of primary authority in eastern studies for at least one or two decades. In the interval, what should we be doing on behalf of the college students who are now finishing their college courses and yet in the process have no opportunity to learn anything about one-half the world?

The only possible short term solution would seem to be an energetic effort on the part of those who have hitherto regarded themselves as specialists in various fields of western history and literature to extend their competence to an introductory course in one of the Far Eastern areas. It will require some pressure on the part of faculty leaders to persuade some of their colleagues to take time from their speciality to acquire this additional qualification but it would appear to be the only answer for the immediate crisis.

There is indeed no reason why the majority of historians and philosophers now teaching entirely within the framework of the western tradition cannot quickly acquire at least passable knowledge of some areas of Indian and Chinese culture. There are ample translations and adequate surveys and there is no need to be apologetic about falling short of advanced specialization in these fields through a lack of knowledge of the language. The problem is even simpler with respect to literature, and publishers' announcements would suggest that translations of the Far Eastern classics are now coming into considerable demand.

In the past, changes in our curriculum have come largely through slow evolution and in response to the individual interests of faculty members. However, we are today so largely out of touch with the cultural background of nearly one-half of mankind, in a period when such knowledge is of urgent importance for our own welfare, that we do not have the time to bring our curriculum up to date in our usual leisurely way. Some positive, even arbitrary, action is required for the immediate establishment of the general courses which I have been recommending.

As a professor of classics I am deeply attached to the western tradition in literature and philosophy. I believe that this tradition conforms so closely to much that is fundamental in human nature that it will never be irrelevant or out of date. And yet I am chagrined and embarrased, as I observe the leaders of Asia and Africa appearing on T. V. broadcasts at sessions of the United Nations, to realize that so few of the professors or the students in the universities of North America have any knowledge of the background of these men and the peoples whom they represent. It would be a mistake to magnify the difficulties of prompt and emergency efforts to broaden the basic arts curriculum. We cannot wait for an increase in the number of the experts, nor need we do so, since the few experts whom we do have now have already provided us with sufficient teaching material to undertake introductory work in their fields.

We cannot do everything in our arts courses and we are hard pressed at present to juggle in fair balance the humanities, the social sciences,

Crash Programs

Much of our present difficulty in assessing and coping with the emergence of the Far East comes from the failure of North American universities to give proper attention to any aspect of life in these countries. When necessary, crash programs have been successful in dealing with grave scientific deficiencies threatening the national welfare. Something of this sort is now urgent in making vigorous efforts to promote university programs dealing with the civilizations of the Far East.

and the sciences, but the swift current of modern history and of world political developments has far outrun our present curricular arrangements. If it is obviously in the public interest that Canadians should be well grounded in the history of their own country, that in some states Americans should even be cautioned by a legal requirement not to overlook their own history at the university level, it is not less important in 1961 that there be prompt provision in our colleges and universities for the immediate introduction and the early extension of courses in the history, philosophy, and literature of the main civilizations of the Far East.

Leadership in the democracies is now generally associated with men and women who have had the advantages of a university education. In all the countries of the West it has been noted by sociologists that national leadership is increasingly offered by university graduates rather than by representatives of social and economic groups previously dominant. Much of our present difficulty in assessing and coping with the emergence of the East comes from the failure of North American universities to give proper attention to any aspect of life in these countries. When necessary, crash programs have been successful in dealing with grave scientific deficiencies threatening the national welfare. Something of this sort is now urgent in making vigorous efforts to promote university programs dealing with the civilizations of the Far East.

The Humanists Have No Processions

"You ask us scientists to tell you what to do with our discoveries? Scientists are specialists in a narrow field, and are not, as scientists, informed about the wider implications of man's endeavor. For this reason, there is something horribly fatuous about petitions and processions and conferences of scientists and scientific philosophers (yes, I include Russell), who are protesting their fear of nuclear weapons. They will not be heard for a number of reasons. Among these is the failure of our teachers in the humanities to do their job; the humanists have no processions or petitions because they have no message. The fact that the scientists' discoveries have precipitated the crisis is irrelevant; scientists have perforce to advance, and this is something that the humanist is only dimly aware of; in his groping he is terrified of the implications for him of advances in technology, insofar as he understands them; of the implications for the future of the world, he has not the faintest conception. Yet cannot we expect that morals, ethics and just plain self-discipline should advance as fast as our technology?

"So, we demand a positive lead from the humanists. We need men with a deep understanding of humanism in its highest sense. We need less study of knowledge and more pondering of wisdom, first in the universities, then in the governments of nations, and finally in the councils of the world. We need thunderers, roarers, who are men of goodwill and true humanity. You come forward and speak your minds or we perish."

JOHN HART
A Technologist Looks at Humanism
Canadian Association of University Teachers Bulletin
Volume 8, Number 2. December 1959. Page 19.

In Praise of Specialization

Whereas specialization is often deplored as "narrow," the value of specialization "within limits" is urged by the chairman of the Social Studies and Commerce group and the director of Arctic Meteorology Research at McGill University (B.Sc., London; Ph.D., Montreal) who is a member of various learned societies, director of the Canadian Scandinavian Foundation, has been a faculty member at Manchester and now at McGill, chairman of the Department of Geography. He is author of "The Restless Atmosphere" and papers and articles on general geography, meteorology and dynamic climatology, physical climatology and bioclimatology, and vegetation studies.

By F. KENNETH HARE

SPECIALIZATION has few friends these days. We never use the word without also saying *narrow*. We take it for granted that a specialized degree is narrower in all important respects than the liberal arts degree. The specialized curriculum teaches its victims a trade, but supposedly does not make them whole men. Employers complain that the specialist is too limited in his horizons to step from his trade into the managerial job. Everyone seems to agree, in fact, except for a few old-fashioned conservatives like me.

I like specialization, within limits. A good intellectual training demands it, and cannot be got by a spreading of one's undergraduate net over too wide a fishing ground. I agree with Alexander Pope that a little learning is a dangerous thing; one must drink deep, or taste not the Pierian spring. What is more, though my undergraduate degree was a specialized science baccalaureate, I usually quote Pope correctly; whereas Beardsley Ruml, friend of the liberal arts college, did not.[1] I hold that almost any specialized degree is better than any general degree—at least in principle; though the brilliant student can, of course, confer distinction on even the silliest curriculum.

Let me ask you to remember my rider "within limits." I do not admire the contents of certain engineering and medical curricula, and I have seen some science honors degrees that would bore me to tears. What I ask is that every university degree should concentrate upon a single discipline sufficiently for the student to have to master some of its more difficult ideas. Mastery can never be attained by passive attendance at survey courses. The latter have their place, of course; but they are dangerously misleading if the student experiences nothing else. At the heart of every worthwhile subject there is a body of difficult ideas and methods. The undergraduate curriculum *must* make the student reach this body, if his intellect is to be stimulated, tempered, and above all tested. And it is plainly impossible to do this in more than one field, if the baccalaureate is to stay a four-year degree.

Within the arts and sciences, then, I believe that the only acceptable degree is one that has a "major" or honors field; and that concentration on that field should be strong enough to get the student deeply into its disciplined core. Plainly this will demand more time in some fields than in others. Physics and chemistry, probably also mathematics, are so involved that the core takes a lot of reaching. At my own university, the honors degree in those subjects demands the almost complete exclusion of other subjects after the first year. The humanities and social sciences are, for the most part, less demanding: I will not presume to pick and choose between them, but I find that my colleagues at McGill are able to design honors curricula that leave room for a modicum of other things. But I doubt whether there is any discipline where less than half the student's time ought to go to his major field.

The British universities seem to take all this for granted. They have virtually squeezed out the old general degree. Every student is an honors student, which means that he will spend most (and sometimes all) of his time working in a single field. His final examination is written entirely within that field, and calls for an advanced and quite sophisticated command over it. But of other subjects he need know little, if anything. Many British academicians, of course, are worried about this extreme position, and there are here and there attempts to liberalize the system—as, for example, at the new University College of North Staffordshire, which has a pure survey course in

[1] *Memo to a College Trustee*, New York, McGraw-Hill, 1959, p. 77.

ASSUMPTION UNIVERSITY LIBRARY

the first year across the whole academic board, followed by a joint honors program in *two* subjects. But these are exceptions.

The liberal arts degree now finds its only large audience in North America, though vestiges of it still remain in the Scottish curricula. In the Canadian universities, the general arts degree has been, with certain exceptions, a loose knit affair allowing a wide choice of subjects, and in general this choice has been exercised to the full. The student likes to sample a broad range of subjects. The rules (in most universities) are such that he can, if he chooses, take one or two courses in as many as eight, nine, or ten subjects; and he is unlikely to take more than four or five full-year courses in any of them. Everything that he encounters is therefore elementary. He cannot possibly reach the difficult core of a discipline. He leaves the university (unless he is very bright, in which case he will live down any curricular handicaps) with little or no conception of the hard struggle, the exciting challenge, and the refinement of understanding that awaits the man who reaches the heart of a worthwhile subject.

The student who contents himself with so vague a choice of fare has wasted his time, and the university that caters to him has wasted its resources. Most of the lecture hours are devoted to survey courses, with few or no prerequisites; neither the instructor nor the student needs to exert his intellect. The student comes to the university, in the vast majority of cases, with a mind still receptive and in need of honing and whetting. He leaves it with a vague knowledge of what objects the several disciplines study, but with little idea of how they actually do it. His critical faculties will still, in most cases, be unexercised.

The tragedy of it is that these broad curricula are planned to create what all of us can admire—the well rounded man. But it is pure illusion to suppose that a curriculum can "round" anyone. It is the curriculum's job to sharpen the intellect, by exposing the mind to the intricacies, refinements, and skills of a discipline. The process of rounding must go on outside the lecture hall. It is the poverty of the extracurricular life of so many of our universities that narrows the student's horizon, not the work done in classrooms.

It is also an illusion to suppose that the liberal arts are the only disciplines that can "round" a man. What are the features of "well roundedness?" Versatility, broad mindedness, a zest for life are among them; among the scientists, we praise a love of the arts, and in everyone we admire an interest in civic affairs. I have many friends who qualify. There is, for example, a biochemist who is also a literary critic, a television personality, a wit, and senior academic; and an engineer who is a master of foxhounds, a leading horseman, a patron of the arts, and an authority on arctic science. When I look at the most versatile and stimulating of my friends, I can see no direct link between the academic curriculum to which they were exposed and the qualities that now enrich their lives—and mine. With one exception, that is: each of them was trained intensively in some single field of attainment.

The formal business of a university is with the intellect. If, through our ponderous curricular measures, we can toughen and invigorate the intellect of our students, we can safely rely on their own genius to round out their capacities. Otherwise we face the prospect, as a Canadian university president warned us, that we shall create men who are not merely well rounded but nearly spherical: and whose standing will have to be expressed, on graduation, not in percent but in radians!

Genius and Criticism

"Certain travellers of the eleventh century relate that they saw at Teneriffe a prodigiously lofty tree which, from its immense extent of foliage, collected all the vapors of the atmosphere, to discharge them, when its branches were shaken, in a shower of pure and refreshing water. Genius is like this tree, and the mission of criticism should be to shake the branches."

MAZZINI: Byron and Goethe

Integrating Testing and Teaching

Concisely and lucidly the development of test ideas and teaching procedures in relation to each other from the beginning to the end of a course is presented by a Manitoba professor of educational psychology, science methods, statistics and eductional research (B.A., B.Ed., M.Ed., Manitoba; M.A., Ottawa; Ph.D., Minnesota) who has taught science in elementary and high schools, has been visiting professor at the University of Kansas, and has contributed to journals and the Fifth Mental Measurements Year Book.

By WILLIAM H. LUCOW

AN EFFICIENT professor has his examination *in mind* before he starts a course. "In mind" is emphasized because it would be just as bad to have the final examination completed in detail at the beginning as to leave its construction to the last minute.

Preplanning builds validity into an examination to the extent that the entire course content is sampled and the proper weights are placed on the various sections according to their difficulty and significance. Preplanning, or having the examination in mind before the course, entails listing: (1) the topics and subtopics to be discussed, (2) the skills and arts to be mastered, (3) the types of reasoning required to attack and solve problems peculiar to the course. To these specifications are then assigned weights in the form of per cent of total marks to be given. At the time of test construction near the end of the course, when *what has actually been covered* is known, the examination items are so selected as to approximate the percentages planned.

Validity may be further promoted by integrating the testing with the teaching. This may be accomplished by: (1) acquainting the students at the outset with the content of the course and the manner and nature of the examination, (2) giving prototype examination items throughout the course with the promise that these items, in altered form, would constitute an agreed-upon portion (say 25%) of the examination. This last is particularly useful in directing reading, but not all the objectives of the course may be met in this way.

There is an item type that may prove useful in directing the reading by students. It has a versatility that permits its being given to students throughout a course and its appearing later in such altered form in the examination that rote learning or superficial learning is defeated. This item is a multiple response type referred to as a Whole-Truth-And-Nothing-But-The-Truth (WTANBTT) item.

A WTANBTT item requires the examinee to choose one correct response from among fifteen possible alternatives, and yet it retains the appearance of an ordinary multiple choice. The WTANBTT item is couched in terms that require the examinee to select one, two, three, or all four of the alternatives. Each item is considered right only if all the correct choices are selected and all the incorrect ones are rejected.

Example: Three times five is more than
(a) 5
(b) 10
(c) 15
(d) 20

The correct response is *a, b.* The mathematical reader will readily verify that there are fifteen combinations of a, b, c, and d, taken one, two, three, or four at a time. Since only one combination constitutes the correct response, the chance of getting an item correct by guessing is one in fifteen.

Consider a course in educational psychology. At the beginning of each lecture the instructor puts two or three questions on the blackboard and asserts that these questions will appear on the examination. In order not to insult the students' intelligence, however, he says that the wording will be altered when it appears on the test paper. An item given in class might read:

Instruments employing projective techniques include
(a) Binet test of mental ability
(b) Minnesota Multiphasic Personality Inventory
(c) Rorschach ink blot test
(d) Detroit Finger Dexterity Test

The correct response to this item is *c* alone. When the item appears on the examination it might read:

Projective tests like the Rorschach
(a) use forced-choice items
(b) tap defense mechanisms
(c) may reveal unconscious desires
(d) elicit personality dynamisms

The correct response now is *b, c, d.* No part marks are allowed. The item as a whole gets one mark or zero.

In the foregoing example, the instructor's motive was to get the students acquainted with the nature of projective techniques. A student who had not gone to the trouble of finding out, but who had simply memorized that "c" was the correct response, would likely fail the item when it appeared in its new form on the examination.

Certain advantages accrue from the policy of starting every lecture with items that will find their way (in some form) on the examination:

1 *It causes the instructor to read the prescribed text.* He must do this in order to be able to formulate the questions. This not only adds validity to his course but may result in new enlightenment.
2 *Students rush to buy textbooks.* Apart from the ensuing beautiful friendship between professor and publisher's agent, this is actually good for the student.
3 *Students arrive regularly and on time to lectures.* This becomes a compulsion with them when they realize that the questions remain on the blackboard very little longer than it takes to write them. Moreover, the prompt and regular arrival is supplemented by immediate and earnest attention, and the lecture may proceed without further motivation.
4 *There is an air of firm resolve in the lecture room.* The motivation engendered in the students by the thought that they are getting examination questions in advance permeates their personalities throughout the course, and makes for increased effort.

Whether or not a professor hints at possible examination questions as described above, the regular formulation of test items *as the course proceeds* will integrate the testing with the teaching, all to good advantage.

Team Work Versus Cubicle

"I may begin by pointing out that as a broad general rule, to which there are many exceptions, there is a striking distinction between the arts and sciences in the relation between the professor and his graduate students. In the laboratory subjects, by and large, the senior graduate students are to some extent collaborators. For a year or two they are members of a team, of which the professor is the permanent captain; he devises the strategy, they at most the tactics. The articles published by this changing team, over the years, accrue to the prestige of the professor (even if his name does not appear on them); it is with the aid of his students that he gains increasing recognition as an authority. In the humanities and social sciences the situation is usually quite different. There may be little in common between the thesis-research of the graduate students and the professor's own personal investigations, which are hindered rather than helped by the necessity of entering into the students' problems. This is the tradition; I need not enter into the underlying reasons, some of which are obvious."

David L. Thomson
Some Problems of the Graduate School
University of Toronto Quarterly

Revamping My Teaching

"I enjoy teaching. What I enjoy doing I want to do well," says a university instructor in clothing and textiles (B.H.E., British Columbia; diploma, Royal College of Science and Technology, Scotland). She reports some changes in her teaching as the result of summer study in graduate seminars in college and university teaching.

By AILSA E. McEACHRAN

IN A RECENT issue of this journal (Summer 1960) E. J. McGrath made the statement, "No subject in higher education more fully deserves the serious thought of members of the profession than superior teaching, its salient characteristics and its causes." In view of my limited experience in the field of college and university teaching I am certainly among those who need to keep this thought in the forefront of my mind. In an effort to obtain some constructive guidance, I became a member last summer of a group of graduate seminars designed to do just that.[1]

One idea I gained was that college teaching is truly what Mary Ellen Chase called it, a "goodly fellowship" in the spirit of which one ought to share experiences with fellow teachers. Through this journal one is able to share thinking and problems with other college and university teachers far beyond one's own campus.

I had, and still have, a very great need to collect ideas, new ones of my own as well as those which others more skilled and experienced in the field may be able and willing to contribute. I needed to know what had gone on before, what is now being done, and what *can* be done in order that I might more effectively plan and evaluate my place in the profession.

In the brief eight week summer session I gained an initial insight into all of these but one idea stands out above all others and because of it I have found it necessary to alter my entire concept of a teacher and of teaching. I became convinced, as Nathaniel Cantor was, that "all genuine learning, in the final analysis, is self-education."[2] This means that there is really no such thing as a teacher, per se, only one who is able to arouse the desire to learn, to guide the learning process, and, if necessary, aid in the translation rather than the transmission of facts, principles, and ideas. The teacher who merely lectures or demonstrates to a class of relatively passive students whose sole activity is note taking (or day dreaming) runs the danger of becoming a semi-automatic word dispenser and is not fulfilling his rightful obligation to his students to instigate independent thought. For what else is real learning but independent thinking along ever widening channels and with ever broadening scope? In limited situations lecturing does have its place, but any classroom procedure that requires the student to learn to think for himself, to work or study by and for himself rather than selecting and returning the professor's words for the reward of a grade, and that instills the desire and the ability to find up-to-date information in any of a hundred sources is, most certainly, superior to the narrow and all too common practice of lecturing.

To be a lecturer is relatively easy, to be a good lecturer requires greater skill, but to be a teacher is a difficult and serious undertaking. The truly effective teacher must know not only his subject matter but also his goals or aims in regard to the learners who come to him. Claude Buxton in his book *College Teaching: A Psychologist's View* points out, "The simple fact, however, as can be testified by those who have tried it, is that the statement of one's teaching objectives is a difficult exercise and, once accomplished, has a powerful effect on one's teaching."[3] Is this not also true for the learner? Would not learning, or self-education, be greatly facilitated if the student were clear in his own objectives, knew where he wanted to go and why, so that he might be able more readily to plan his route and evaluate his progress?

No matter how it is viewed, education is an active process. Both teacher and student must remain at all times active in both mind and body, never for one moment forgetting the ultimate goal, never ceasing to evaluate that goal in terms of changing needs and ideas, never stagnating through want of thought or action to change or alter the methods used to achieve that goal. "Edu-

cation is for use; it is for action. It is to enable students to cope with the problem situation of conduct, of aspiration, and of disinterested reflection. Thus it is for effectuality in total living."[4] If education is, as Ordway Tead points out in his quotation above, for use and for action, then we who are concerned with education, be we learner or teacher, must make it something alive and vital.

Because of this, and because my thoughts and hence my philosophy were so altered following my participation in the summer seminars, I was compelled to completely revamp the courses I was to teach this fall. The course in textiles which I had previously taught had been styled as a lecture series up until this time, but I came home with many ideas about how it could be changed to make it more dynamic. The new course that I was to have was one in communications in which home economics students, in their senior year, learn the techniques of participating in panels, round table discussions, and symposiums, and gain experience through the medium of radio and television, all of which play an important part in the graduate home economist's life. I must admit I was more than a little worried about how I was going to tackle this new problem, but decided that this would be an excellent opportunity to try a completely new teaching method. I knew that it would be a real challenge for me, but I hoped to be able to make a success of it.

In my large frehman textile class, where there is a great deal of detail to be covered in a short time, I am afraid I have not yet developed a situation which is truly satisfactory. I did, however, make some changes which are at least a beginning. One such change was based on a story concerning that great teacher Agassiz. The tale tells us that a young student came to Agassiz with a desire to learn zoology and a willingness to start immediately. Without comment Agassiz handed him a chemically preserved fish and then left the room. It was hours later when he returned to the somewhat perplexed student who, in the meantime, could find nothing else to do but examine and reexamine his fish. He was questioned briefly by Agassiz as to what he had observed and then left alone again. This procedure was repeated until the student, entirely on his own and much to his surprise, had learned through his own observation and thought much about the fish, more in fact than originally he could have imagined there was to know.[5]

In adapting this concept of independence and self-education to my own textile class, I gave each student a small sample of fabric and asked them to write down all that they could determine from inspection of it. I hoped that this would stimulate powers of observation, arouse interest or curiosity, and prepare a background for the work that was to follow. The results, although useful, were not completely successful. Looking back I can see several possible reasons for this: perhaps a freshman class requires a little more orientation before going from the spoon feeding that is prevalent in most high schools to the self-education that is desirable in a university; perhaps I did not allow sufficient time for the scheme to work; or possibly the varied background of my seventy students could be responsible, in part, for the diversification of response. At any rate, at the end of the term I plan to give back each student's own fabric sample and original description and ask each of them to correct and add to the description in the light of their increased understanding of textiles. Perhaps this will augment the value of the assignment.

Apart from this initial endeavor with this class, I have tried to incorporate one or two other ideas. There have been no reading assignments but I have discussed with them a list of books that they might find interesting and helpful. Another time I think that it would be a good idea to have them, from time to time, give brief oral reports on their reading. They have also been given self-study assignments, some to be granted a grade, others with no grade reward. To date, both types of assignment have been done satisfactorily.

In my small senior class in communications I have had a much more satisfying experience. The term's work has been entirely student planned (with only minimal guidance from me) with the girls working diligently and achieving much. This, I might add, occurred only after they recovered from the shock of our first meeting when I told them that I might seem to teach them nothing and that my chief aim would really be to help them learn. They must, therefore, decide why they were in my class, what they wanted to learn, how they would go about it, and finally, how I could help them gain their goals. It worked! We have had thoroughly enjoyable class sessions (both at the university and in my home . . . a valuable idea in teacher-student communications in itself borrowed directly, with thanks, from my

summer experience) and have been able to cover all the important aspects of the course.

Apart from the students, the other members of the faculty have been interested in hearing about the courses I took this summer and in my new concept of the teacher's role. We have had more than a few discussions along these lines, many based on excerpts from my summer's reading which I post periodically on the bulletin board in the faculty lounge under a title of, "Points to Ponder."

Indeed, there is much to ponder, especially for those of us who are at the beginning of a career in college and university teaching or for those who want or need refreshing. Teaching is one of the greatest challenges offered to man and as with other challenges, well met, it can be the source of much pleasure. I was very glad to find in W. J. McKeachie's "The Work of the Teacher"[6] a section on teacher attitudes and to find therein a comment that teaching should be fun as well as providing other satisfactions. I, too, believe that this attitude can have a real effect on the teacher as a person and hence be a positive influence for good teaching. I enjoy teaching. What I enjoy doing I want to be able to do well. Ordway Tead's conception that "education is a venture in faith"[7] gives deeper meaning to teaching. Surely a combination of the two approaches should result in better teaching and a more meaningful and satisfying life.

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[3] Buxton, Claude E, *College Teaching: A Psychologist's View.* New York: Harcourt, Brace and Company. 1956. Page 64.

[4] Tead, Ordway, *College Teaching and College Learning.* New Haven: Yale University Press. 1949. Page 18.

[5] Peterson, Houston, *Great Teachers.* New Brunswick: Rutgers University Press. 1946. Pages 213-214.

[6] McKeachie, W. J., "The Work of the Teacher." Mimeographed preliminary draft for a book edited by Nevitt Sanford. Page 119.

[7] Tead, Ordway, op cit. Page 1.

We Must Do Far More

"No one—scientist or non-scientist—has a monopoly of culture. 'No man is an Island, entire of itself.' Whether they like it or not, humanist and scientist are both a part of humanity.

"It is not enough, however, to look at men like Linus Pauling in the United States and Bertrand Russell in Britain and applaud (from the sidelines) the way in which they have accepted moral responsibility in alerting mankind to the awful dangers attendant upon the misuse of man's increasing knowledge of nuclear physics. In our Canadian universities we must do far more than we are doing to provide the Science student with an adequate humanities programme—far more also to ensure that the Arts student has a lively comprehension of the role of science in our lives today."

ALEXANDER M. ROSS
A Reply to Dr. Hart
Canadian Association of University Teachers Bulletin
Volume 8, Number 3. February 1960. Page 28.

ASSUMPTION UNIVERSITY LIBRARY

"Unskilled Laborers"

An assistant dean of engineering (B.A., Loyala; M. Eng., McGill) who was a navigator in the Royal Canadian Air Force 1942-45, draws upon his experience in counseling students to tell us that large numbers of students have difficulty in college simply because their preparation has failed to give them the necessary skills.

By GEORGE W. JOLY

SOME three hundred students who have failed in the final examinations visit me each summer for advice about continuing their careers in the university. Since fitness to profit from continued attendance cannot be judged from a mere reading of a record card, the faculty's committee on standing and promotion requires that each applicant asking to repeat the year be interviewed individually. Those who have become casualties are not allowed to become statistics by default.

But in the case of those who have failed the freshman year, I am beginning to believe that they had become statistics for failure before arriving at the university. The kind of preparation they had made for it during eleven years of grade and high school almost postulated their failure in the freshman year. To use an industrial term, most of these freshman failures that I interview might be described as unskilled laborers who have applied, and mistakenly have been accepted for work in a precision shop.

In this industrial analogy, studentship is a trade in which one spends eleven years as apprentice and journeyman in grade and high school before setting oneself up as a master in the university. If the time of apprenticeship has been badly served, nothing can make up for it except to spend more time. It is unreasonable to expect that registration at university will automatically infuse with those basic techniques of scholarship a student who has spent the previous eleven years avoiding learning them.

What are these scholastic skills a student should have acquired by the time he enters university?

1 The habit of sustained serious application to study over a period of nine months at a time.
2 Sufficient flexibility of attitude to alter, or even discard, study procedures which are proving ineffective, and the early recognition that such a change is necessary.
3 The ability to take notes that constitute the essence of a lecture instead of a stenographic report of it.
4 The ability to distinguish between seeing the logic of a statement and the personal use of that statement in a new situation: a recognition of the difference between theory and application.
5 The habit of mastering a suggested approach to a problem before offering it opposition.
6 Ability to carry forward simultaneously all subjects of the curriculum.
7 An experimental knowledge of how much effort is required to achieve a predetermined level of accomplishment.
8 An ability to make an optimum allocation of available study time among the subjects of the curriculum.
9 An economical use of spare time.

Many would probably agree that the lack of learning experience in preparation for effective university work contributes to first year failures. But few university teachers would grant that this was the major cause of these failures. Even those who would grant this would not concede that at the level of university action this neglect was beyond remedy. There is a general belief that remedial action is possible for students lacking training in learning and that the detailed prescription for it is usually found in the freshman adjustment program.

Freshman successes may or may not be attributable to adjustment programs. To what, then, are freshman failures attributable? Passing over the genuine case of personal difficulties which a wise dean will make it his duty to search out, the elementary cause is most often to be found in the academic inexperience I have described. It is almost always a case of an unskilled laborer trying to carry out a skilled operation. It is a case of trying to overcome in one year eleven years' neglect of learning training.

If such a student may apply to repeat the year, it is at this point of his career that a

great delusion is perpetrated about his failure. The student is told by the dean that he lacks the necessary scholastic experience to do university work. The student accepts this as true, but promises to acquire it if he is permitted to repeat the first year. The dean, in his experience, has grave doubts that he will succeed in acquiring it, but here is a nice young man and perhaps he should be given a chance. The student leaves with a profound feeling of accomplishment. When he fails a year later, the dean is adamant that he must withdraw permanently from the university.

There is a certain amount of tragedy in such waste of a year of a man's life. The real tragedy, however, is that so many promising young people seeking a university degree are "unskilled laborers," a handicap which renders them incapable of achieving it.

Coral Insects Do Not Communicate

"Scientists and humanists belong to two separate cultures between which there looms an ever-widening gulf. They no longer even try to understand each other. In the last bulletin of the Humanities Association there is printed a talk to his fellow humanists by Professor Priestley of Toronto in which he refers to scientists as 'gentiles.' When you use such a term, even facetiously, you are of course asserting that you and your fellows in the humanities are a chosen people. And since science in our modern civilization is the path to power, the hubris of the scientists when they refer to the humanists is even more insulting. Natural scientists now seem to communicate with each other mainly in mathematical symbols. Our literary humanists, with their unmathematical myths and symbols and archetypal patterns through which they claim to have access to a higher and holier form of truth than is available to scientists, have fallen prey to a mania for noncommunication with the rest of the world. Our social scientists, especially our sociologists, strive for status by developing a pretentious jargon which frequently makes them unintelligible, so I am told, even to one another. Etc. Etc. The large university resembles one of those coral islands in the Pacific in which each little insect leaves its little deposit of coral shell unconscious of what its fellow insects are doing but buoyed up presumably by the faith that somewhere in a coral heaven is a great coral God who understands what it is all about. But the essence of coral insects is that they do not communicate."

FRANK H. UNDERHILL
Academic Freedom and Tenure
Canadian Association of University
Teachers Bulletin
Volume 8, Number 2. December 1959. Pages 10-11.

Do Our Students Want to Learn?

Only the student can do the learning says an associate professor of the University of British Columbia (B.A., M.A., British Columbia; Ph.D., Columbia) who has been a teacher of mathematics and science in secondary schools, was in the Canadian Army 1939-45, and has been a member of a faculty of education since 1954.

By ROBIN M. SMITH

WE ARE INCLINED to assume that our students recognize and appreciate the importance of the course we give and the sequence of topics which constitute our individual lectures. But is not this appreciation too important a factor to assume, simply because the student chose to register in our class? Is it not too important to devote merely a part of the first lecture to establish? The fact that we may lecture with obvious enthusiasm and conviction may help to convince the student, but will our enthusiasm alone generate the action on the part of the student which is so necessary for him to obtain the kind of education we hope to provide?

Only the student can do the learning. As teachers we can provide the opportunity to learn, we can provide material to learn, and we can indicate how to learn, but further we cannot go. Only the student can present himself in class, can capture the material we present and practice the procedures which will result in the knowledge, skills, and attitudes which constitute our educational objectives. The teaching skills which we cultivate are aids to student learning but aids only. We speak clearly so that the student may hear and so follow the thought or argument. We write plainly on the blackboard so that the student may read the notes written. We choose our words carefully so that the student may understand what we say. We choose appropriate anecdotes and illustrations and examples so that the student may see the meaning more vividly and clearly. Nevertheless, only the student can rehearse information to the point that will make it available on demand, only the student can practice the skills of thinking which will enable him to face relevant problems with confidence. Only the student can interpret his experiences to develop the attitudes we hope he will acquire. The student must do these things for himself.

Since it is the student who must do the learning, then how hard and how intelligently he works at it is a crucial matter. Furthermore, he will work only to the extent necessary to accomplish his own purposes. He does what he thinks is necessary and profitable. Thus we should see educational activities, really, in competition with all the others which might engage the student's attention. If he presents himself in class it is because the consequences of not attending are less desirable than the consequences of not doing something else, or because the advantages in attending outweigh the possible advantages of alternative activities, or both. But this is not all. How he performs each activity, educational or other, is determined in some measure by the same process. An assignment that is considered important by the student is worked at assiduously and carefully. On the other hand, a useless or, in his view, unprofitable assignment receives appropriate attention and care, namely the minimum necessary for acceptance, or is avoided altogether if this is feasible. Indeed, how could it really be otherwise?

Such ability to apportion attention and energy according to our estimate of the requirements of a situation is really a wise provision of nature. The consequences of involuntary attention and effort are fit topics for nightmares and horror movies. If we can accept this view, even in part, then a more realistic appraisal of the teaching situation is in order. Close attention to a lecturer may be expected only when the listener wants the material offered. The student may be expected to make usable notes of what is said when he expects to have a good reason to refer to them. The student will ask questions and offer comment, first when it is safe to do so and secondly when he wants clarification or recognizes an opportunity to add to his own stature in the class or for some other adequate reason. This concept is of course as old as persuasion itself. But do we as lecturers operate as if we knew that it operates in the classroom?

The inference for a lecturer seems plain enough. If he wishes the student to attend to what

is said, to make notes, to review lectures already given, and to prepare for those yet to come, for example, then he must ensure somehow that the student's desire to do these things is sufficiently in excess of his desire to perform competing activities. If the lecturer is not concerned with such matters, then no effort along these lines can be expected.

A lecturer, surely, is prepared to justify the material he presents. Rather than assume that his class already appreciates the reasons for presenting this material he can share his own knowledge in this regard. He can point out both the place of the course in the educational patterns of the students and the contribution made by each individual topic as it is taken up. He can share his appreciation of ideas that have had great influence. He can point out the novel twist to an old idea that made it applicable to a different class of situations. He can indicate the acts of genius, ingenuity, or desperation which resulted from certain problem situations. He can explain that the drudgery involved in the mastery of certain material now will pay great dividends later and why. In short, the lecturer can indicate to his class at least why he thinks the lecture is worth their time and effort. There is also a rather obvious inference if the lecturer feels that he has difficulty in making a convincing argument.

The same point of view may also be applied to examinations written, or exercises handed in. The quality of these activities is not determined solely by the ability of the student. The realization that the student uses only as much talent as seems necessary under the circumstances should not affect the evaluation, but it should at least place the responsibility upon the student rather than the instructor. But if this realization eases the pain of the instructor even ever so little it is a profitable notion.

Scientist and Humanist

"The humanist and the scientist need to be better friends. The humanist will succeed in justifying himself historically only if he enters into a self-respecting alliance with the scientist, which rests firmly on mutuality of support and understanding. The scientist, it is hoped, will not dodge all responsibility for what happens in the world through the practical applications of his thinking. He will share it with the professed humanist and the politician and all the others. He will come out of his ivory tower laboratory when possible, and reflect on human concerns as a man and citizen. Unless he can find time and inclination to give some thought to the criticism of human culture, how can he even know whose 'message' is worth accepting? Every scientist lives in two worlds, and many scientists have made invaluable contributions to both wisdom and knowledge."

F. S. Howes
La Trahison Des Clercs (Editorial)
The Canadian Association of University Teachers Bulletin
Volume 8, Number 2. December 1959. Page 5.

Freshman Success: A College Responsibility

University students need to be weaned and the weaning must be placed in the hands of faculty members, according to an assistant professor of education (B.A., Sir George Williams; M.A., McGill) who has served in industry, was vice president of a manufacturing company, served in the Canadian Army in England, France, Belgium, and Holland, participated in the preparation of a Dominion Bureau of Statistics publication on Student Progress Through Schools, and now teaches psychology in the McGill University Institute of Education in which he is assistant to the director.

By MILES WISENTHAL

CANADIAN universities, like universities in other parts of the world have been facing freshman classes of increasing size and complexity. The modern university freshman is a product of a school system which provides for much wider interests and capacities than was the case even thirty years ago. This means that our entering freshman class of 1960 represents a broader spectrum of developed abilities and interests than did the class of 1930. Coupled with increased numbers of freshmen we find a shocking increase in the proportion of failures of first year students at many universities. The attempts that are made to explain this condition and the means suggested to improve it frequently reveal both a high degree of naivete and a low degree of self-appraisal.

Too often we hear that freshman students are incapable of writing a grammatically correct sentence; freshman students have not yet learned simple arithmetic computation; they are incapable of working on their own; they are immature, too young, and cannot spell. All of the problems, it is suggested, would be solved if the high schools did a proper job of preparing their pupils for university work. Some suggest that university entrance standards should be raised so that only the top six or seven percent would be admitted. While these explanations and suggestions may have some validity and merit, they are at best only a partial answer to the problem, and at worst a form of self-delusion. They are a partial answer in that the application of unrealistically high entrance standards negates the role of the twentieth century university. They are self-deluding in that they fail to take into account the need for a realistic awareness of dealing with what we have, rather than what we might wish for.

To suggest that many entering freshmen are still adolescents and unprepared for college is undoubtedly true; but to suggest that this can be changed by changing the high school is equally untrue. Without entering into a discussion on the nature of our high schools, suffice it to say that they are largely a reflection of modern social practice. We live in a welfare society which by its very nature reduces independence and delays maturity, and our high schools are in step with this facet of modern society. The cold, hard facts are that colleges receive the products of this environment, and too frequently these products are immature, spoon fed adolescents. The problem that faces institutions of higher learning is that of bringing these young people to a stage in their development that will make them mature, independent adults who can perhaps effect changes in our society that will reduce this period of adolescence in future generations. If we accept the proposition that basically this is the function of undergraduate university training, we can discuss how this can be best brought about.

One school of thought believes that the best way to teach a child to swim is to throw him into the water. Those who are capable of learning to swim quickly will survive and the others will drown. There is no doubt that this is an effective but inhuman way of separating the quick from the slow learners. This philosophy of survival pervades the thinking of many faculty members of both large and small universities and colleges. Their argument follows the same line as the "learn-to-swim-by heaving-them-in" adherents. These faculty members feel that, if they teach their courses competently, correct student assignments, and set reasonable examinations, they have fulfilled their obligations to students. Students who fail to pass do not deserve the privilege of a university education. They lack the maturity

and independence to profit from a university education.

As a counter argument the following is suggested: any student who enters a university has met the entrance requirements; he has demonstrated sufficient academic aptitude to cope with a university course of study. Essentially his problem is one of adjustment. He has to learn how to handle the new independence which the university provides; he must be helped to acquire a more adult approach to his study problems; he must be taught how to work independently. Once the university has accepted the student it has also accepted a certain measure of responsibility for his future academic success. This does not imply a continuation of the spoon feeding processes of the high school, but it does mean that a process of academic weaning must be instituted if we are to provide our freshmen with the opportunities for success that they deserve.

The responsibility for this weaning must be placed in the hands of faculty members. The use of faculty advisers is quite common, and the practice outlined below is one that the writer has observed in operation for a period of five years.

A faculty adviser is appointed to each 20 to 25 students. He is responsible for most of the initial documentation and the recording of the personal history of each member of his group. Results of entrance tests, interest inventories, and personality profiles are all part of the student's file which is kept by the adviser. Regular advisory group meetings are scheduled on a weekly basis with discussion topics planned and prepared in advance. Initially, the adviser plays a major role in the discussion, and attempts to bring out problems which are common to a large number of students. As the students become more familiar with each other, and as the faculty member becomes a less awesome figure, the discussions become franker and more lively. If the faculty member plays his role well he tends to be accepted as a group member of a special kind. He becomes the approachable and understanding tutor who is endowed with a wealth of knowledge and information. He is able to direct students to source of material pertinent to a wide variety of subject matter. The freshman knows that his adviser can be depended on to provide positive suggestions on how to deal with academic and personal problems. The adviser keeps himself informed on the progress of members of his group. Particular attention is paid to mid-term test results, attendance records, and participation in extracurricular activities. The adviser's job is not one to be taken lightly if it is to be done well.

The main weakness in the adviser-student relation is the unwillingness of many faculty members to attach sufficient importance to their roles in this relationship. No amount of organizational structuring on the part of university administrators can make a good freshman adviser out of an unwilling professor. It is essential that the faculty member feel that his advisory job is important. He must be fully committed to the philosophy that freshmen need to be helped over the hump of first year university, and that this helping is part of his total teaching assignment. There is no set pattern of operation for establishing good adviser-student relations. Each faculty member who willingly takes part in such a program will find his own best means of establishing satisfactory contact with students.

University and college administrators who recognize the importance of the advisory work of faculty members must make proper provisions so that the work can be done effectively. It is useless to provide the needed machinery for the job without providing sufficient time to carry it out. A faculty member who is adviser to a group of twenty freshmen should be devoting at least the same amount of time to this aspect of his work as he would to a course involving two lecture hours per week. A proper advisory job cannot be done in moments stolen from other pressing duties, or in moments of absence of mind. A sound administration will recognize this fact and provide for it.

The problems of freshmen students can be reduced if they each feel that there is some one person in the complex world of the university who is concerned about them. The faculty adviser can and should be this person. The problem of reducing freshman failure can be partly solved by instituting advisory programs based on a sound philosophy.

Fifty New Books

Government and Classroom

Reviews by ORDWAY TEAD

THE FEDERAL GOVERNMENT AND HIGHER EDUCATION, by the American Assembly, Columbia University. New York: Prentice-Hall, Inc., 1960. ix + 203 pp. $3.50.

THE PROCESS OF EDUCATION, by Jerome S. Bruner. Cambridge: Harvard University Press. 1960. xvi + 97 pp. $2.75.

ONE MIGHT well wonder why these two books are bracketed together for review. The reason is simple. One is examining the implementation of college purpose in a searching way; the other is examining the classroom processes for effectuating purpose in an equally penetrating way. In short, these two books supplement each other to a remarkable degree, albeit they emanate from disparate sources and motives.

I must record my profound admiration for the volume produced by the American Assembly of Columbia University. Rarely has such a body come through with such a cogent, needed, embracive, and balanced utterance as this presents. The basic problem posed, as the title implies, is as to the part the federal government now plays and its effectiveness, and the part which it should be expected to play in the future and the ways and means of assuring this.

Perhaps the high point of the volume in terms of penetrating expression is comprised in the contribution of President Douglas McKnight of Lawrence College. He is at pains to point out in fresh terms the new situation confronted in higher education. He stresses the shift of populations from town to city, the shift from native skills to highly developed special talents, the shift from a self-contained economy to a world-related one, the shift from a frugal to a "society of high prosperity and low responsibility."

There are factually meaty chapters on the present status of federal activity and on federal support of research. The contribution of President John A. Perkins and Daniel W. Wood directs itself to the possible ways and means of further federal assistance to higher education. And it comes up with the suggestion for a nationally created educational foundation, broadly paralleling the National Science Foundation in structure and function. The underlying emphasis is upon the truth that "our whole people must, if effective action is to take place, understand and agree upon the essentiality of education. . . . If the objectives are to be realized, enlarged contributions and taxes from many sources, students, graduates, business, private benefactors, and state and federal governments will be required."

The book concludes with the emphasis supplied by President Knight that "we may recognize our need for nationally organized direction—a need in which each institution and each source of support can have its part to play." In conclusion, he says: "And we must have decisions—finally, but perhaps most basically,—about the balance, the proportion, and purpose in higher education to which all our various kinds of aid will be directed."

This book should be read by everyone who has any connection with the support of higher education. It may not be the last word—there is no such—but for orientation to the current problem and need it is a realistic appraisal without necessarily being a categorical program.

Professor Bruner's book derives from another recent conference called by the National Academy of Sciences. And the problem posed was "to examine the fundamental processes involved in imparting to young students a sense of the substance and method of science." The focus was on elementary and secondary education. But so fundamentally did the writer of this report approach the problem that his findings are virtually as valuable for colleges as for any other level of study. This may be gathered also by noting the titles of his chapters as follows: "The Importance of Structure," "Readiness for Learning," "Intuitive and Analytic Thinking," "Motives for Learning," "Aids to Teaching."

Despite central attention on science instruction the author is properly emphatic that "it is certainly plain that at the very least there will have to be energy devoted to improving curricula and teaching in the humanities and social sciences comparable to what is now being devoted to science and mathematics."

Any college teacher will find stimulus in this presentation even though it poses almost as many unanswered teaching problems as it does positive conclusions.

Student Personnel Program

A Review by ORDWAY TEAD

A COMMITMENT TO YOUTH edited by Abraham S. Goodhartz. New York: Bookman Associates, 1960. 284 pp. $4.50.

THIS BOOK is an exposition of the "Brooklyn College Student Personnel Program," reviewing its inception and describing and evaluating its present functioning. It is a splendid exemplification of the fact that the large size of a college does not of itself preclude the counseling of its students on an individual basis sufficiently adequate to supply genuine guidance to a large body of students. It is a reasonably objective and detailed setting forth of ways and means.

Not the least important of its recordings has to do with the various methods employed by which the whole program has increasingly become integrated with the labors and support of a large part of the faculty itself. The frequently encountered resistances between specialized counseling staffs and members of the teaching group seem to have been effectually minimized if not removed. Counseling is here integrated with teaching in a gratifying and sound way.

The book will be of specific practical value to college administrators, counseling staffs, and most especially to faculty members who may have been entertaining reservations about the integral value of the counseling services a college in this day is virtually compelled to offer given the increasing diversity of all the backgrounds and personal interests of the college population. What Brooklyn College has done in this vital direction is here offered in evidence to other colleges.

A Look at Professors

THE NEW PROFESSORS edited by Robert O. Bowen. New York: Hold, Rinehart, and Winston, Inc. 1960. 218 pp. $3.50.

A Review by E. D. DURYEA

NINE YOUNGER faculty members, each of whom has attained some distinction in his institution or in his discipline, have contributed to *The New Professors.* Each has written an introspective, autobiographical answer to two questions posed by the editor: How did you get into the university? What are you doing there?

The outcome consists of a compilation of essays which will give the lay reader a better understanding of those who teach in higher education and the academic reader some solid thought for personal and professional reflection. The book does not set out to typify the professoriate, however. Nor does it do so incidentally. At best, it can stimulate each college teacher who reads it to some important insights into his own services at his college or university and into his aspirations in the academic community.

One finds some common element which sets this younger group apart from their elders. The "new professors" do reflect a changing attitude within the profession which the editor recognizes in his introduction.

> Idealism . . . is an important element throughout the symposium. The idealism expressed in the essays, however, is not in the traditional academic form. It is immensely more practical than the lofty but unarticulated notions that caused the ivory-tower cliché. From essay to essay, there is a note of self-respect through competence of craft, through actually being able to do rather than merely to teach. This is a new note in the academy. Whatever teachers may actually have been in the past, they have not always thought of themselves as doers. Possibly the major distinction between an older generation of academics and the current one is that the new man does his professing with more relevance to the world off-campus.

It interested this reviewer to note that interest in subject rather than interest in teaching continues to motivate aspiration to the academic life. One writer who lists himself as an adviser at a state university did enter the professional lists because of a desire to help others find their way in life. But with this exception, the "new professors" entered academia because of an interest in the subject, because of the excitement of research and a concomitant search for freedom in conducting research, and because of a campus atmosphere conducive to intellectual habits. Yet all demonstrated a concern with students and insights into teaching effectiveness. This balance between subject orientation and concern with student learning was stated by the chemist of the group:

> I must whet an interest, an interest that will enable the student to teach himself the elementary matters that I propose to him and that will also be sufficient to inculcate a deeper interest leading to further lifelong study. And I must present in an ordered manner those things by which interest is engendered. Both of these are equal in importance.

One notes that the one classicist of the group found his career not at a university but in one of the more respectable and traditional private

academies. Also, it seems pertinent to add that one essayist ranks as victim of a congressional investigating committee. Needless to say, he makes a strong plea for the place of the dissenter if vigorous search for new insights and creative thinking are to have a place on our campuses.

On the whole, the reader must work his way through what seems a great deal of personal introspection to reach insights into how Mr. Bowen's professors see their function in their college or university. But the unstructured autobiographical handling of the essays offers a satisfying experience for the reader interested in or connected with the academic profession.

A Look at Governance

GOVERNANCE OF COLLEGES AND UNIVERSITIES by John J. Corson. New York: McGraw-Hill Book Company, 1960. vii + 209 pp. $5.50.

A Review by J. KENNETH MUNFORD

THE AUTHOR explains *governance* as "that administrative process which in the university or college is distinctive, the process of *deciding* and of seeing to it that the decisions made are executed." In this study he examines the sometimes amazing process "or art with which scholars, students, teachers, administrators, and trustees associated together . . . establish and carry out the rules and regulations that minimize conflict, facilitate the collaboration, and preserve essential individual freedom."

When he comes to the role of the faculty in governance he makes the important point that the authority and responsibility placed in the faculty, as a body—by tradition, by custom, or by formal bylaw—provide a primary difference between higher education and other forms of enterprise. The faculty's broad mandate, of course, is not without drawbacks and may result, Corson points out, in "a catholic concern and a claim to comprehensive competence in a wide assortment of matters of institutional policy and administration" regardless of individual experience or competence. He sees a danger that, as institutions grow larger and administration depends more and more on a large central staff, the faculty's "influence in governance is repeatedly challenged," and that indifference, pressure of other duties, and increasing complexity of higher education may shunt the professor away from one of his vital functions.

The problem, therefore, becomes one of synthesizing the values of active faculty participation in governance against a background of increasing difficulty. For the most part, Corson defines the problems and points the way to additional investigation rather than offering pat solutions.

A Twig on a Tree

EDUCATION FOR EFFECTIVE THINKING by William H. Burton, Roland B. Kimball, Richard L. Wing. New York: Appleton-Century-Crofts, Inc. 1960. xi + 508 pp. $6.00.

THOUGHT is described by Dagobert D. Runes (*Dictionary of Thought*) as "a twig on the tree of emotion and instinct. As it was a million years ago, the first is still an outgrowth of the latter."

We point to Man Thinking as the noblest manifestation of the universe excepting only love in its highest aspects. Is it belittling to call thought a twig? Is it belittling to call man a speck in the universe? Nothing is dwarfed by being put into proper perspective. It is thereby revealed.

A book on Thinking is a potential factor in helping thought to grow out of emotion and instinct. Emotion and instinct become human and noble in the forming of the twig of thought.

That twig is precisely our concern as teachers —the twig and its fruition in the personalities of our students. How are we doing? Are we teaching at the thought level? Are we thinking and are our students thinking?

Poor distraught Ophelia probably made no clear distinction between rosemary and pansy, remembrance and thoughts. Do we? If we will examine our tests and examinations, we might find that what we demand is mostly remembrance —of facts, dates, names, formulas, definitions. How much thinking do we demand? We often wish our students were better at remembering, but we really are not training elephants but students with human brains. Is not our most important responsibility to encourage and guide their thinking?

We now have an outstanding new book concerned with education for effective thinking. It has the appearance of a comprehensive textbook. It would be an excellent textbook for a course in which college and university teachers by the hundreds and thousands could profitably sit.

Could not any of us use further discipline in the art of thinking and in the strengthening of those portions of all the courses we teach that are, or might be, designed to stimulate and develop thinking power in our students? Few of us will enter a formal course in thinking and teaching to think, but with this excellent book any of us can be guided in self-improvement as teachers and thinkers.

To get the most benefit we had better approach the book in humble spirit and with a determination to adapt its contents to our individual needs and interests. It is a mine of information and stimulation.

The book has three parts. First, reflective thinking is defined and described and the importance of developing attitudes favorable to thinking is set forth. The second part of the book is concerned with the thinking process. The third part is concerned with thinking in the teaching-learning process, showing specifically how the various subjects lend themselves to teaching thinking.

Examples of basic concepts of this book are:

- **"Any person can be trained, within the limits of his natural intelligence, to think better than he will think without training."**
- **"Thinking is, in fact, 'natural' to the extent that all normal individuals are equipped to do it. Organized, systematic thinking, however, is clearly an acquired ability. Definite, continued experience in problem solving together with analysis of one's processes are necessary."**
- **"Our aim here is to give teachers an introduction to what it means 'to think' and to some of the processes through which the thinking of students may be improved. We hope that further reading and study will be stimulated. The material can be used also, no doubt, in areas of general education far removed from teacher training."**
- **"The ingenuity of the teacher is the crux. Teaching for thinking is as fully an individual matter as is thinking itself. The essence lies in devising methods through which students do, perform, and experience the processes to be achieved."**

Emerson in *Intellect* wrote: "What is the hardest task in the world? To think." He then described a thought process with its culmination: "Then, in a moment and unannounced, the truth appears. A certain wandering light appears, and is the distinction, the principle, we wanted. But the oracle comes because we had previously laid siege to the shrine."

What could we find professionally more important to do than to increase our own competence as thinkers and give our students education for effective thinking? DMG

Educational Problems on a Thought Level

INTRODUCTION TO EDUCATION by John P. Leary, S. J. New York: Pageant Press, Inc. 1960. 176 pp. $3.00.

FATHER LEARY has presented his book with a hope: "It just may be that this experiment in getting young college students to approach educational problems on a thought level as opposed to the descriptive and the statistical will work." One may have a few reservations but may assuredly say it is an excellent book, concisely written by a clear thinker.

Almost any professor can read it with profit, emerging with a sounder theory of education. Each chapter, in harmony with the purpose of stimulating thinking, has supplementary elements: challenging quotations to be evaluated, points for discussion (or for thinking). A section of the first chapter is basic to the whole book and to any philosophy of education: "what the thinker concludes about man." One comes back to the question of what man is for:

> Man is a sacred person with roots deep in eternity. His longings and his origins will be satisfied with no less than an eternal answer. To educate him, consequently, as an advanced monkey, a social unit, a robot or a victim to blind forces over which he has little control, is to caricature man. It is at the level of *purpose* in education that the student must gradually come to understand the immensity and complexity of the job that the school has set itself.

The second chapter deals with the many educating factors in society of which home and family are the most important. The limitations and fault of a relativistic philosophy are pointed out.

Then follow three notable chapters successively devoted to classical education, Christian education, and experimentalism. We get the spirit of classical education in which "heroes and gods embodied ideals common to good and wise men." "This kinship with the past and the awareness of common joys and anguish drew men consciously together." This was a forerunner of modern "shared experience." Classical education not only was concerned with the primacy of the mind but also had "a poignant sense of what was emotionally rich in man." Unfortunately "a kind of cult for antiquity took over."

Christian education is presented as an inherent element in Christianity. "The Church enthusiastically initiated and fostered schools." They "are engaged in the most arduous art of reconcil-

ing all values, seen and unseen, today's, tomorrow's and next year's."

At once appreciative and critical, the chapter on experimentalism or relativism in education cites energy and zest as its hallmarks and credits it with many a new approach in education. "The experimentalists represent a kind of restlessness, a dissatisfaction with things as they are," and from this refusal to be complacent society derives strength. Yet "equating physical and measurable reality with all reality undid man at his ankles:"

> The premise that men are not essentially different from other animals has astonishing implications, and there are signs along many fronts that the above conjectures are not too remote from what is actually occurring. The behaviorism and sentimentalism in psychology alone are appalling. We picture an increasingly dreary world if it is to be built ultimately upon the level of sense reality alone.
>
> . . . any group of educators who lack a clear idea of man's aims, and who as a matter of policy pride themselves on not being "absolutist," are bound to end up like miners panning for gold and not knowing the precious stuff when it comes through. Or should they recognize the gold, they might logically say, "Oh, well, who wants gold anyhow?" or "Does it have value at all?" or "What is value?" This sounds very much like another man long ago who asked "What is truth?" And they are so often like him, too, in that they query constantly but they do not wait for the answer.

This is half way through the book. Has not the author at this point got us to the thought level (as he hoped) whether we agree or not?

The latter chapters are on curriculum, elementary school, secondary schools, universities, and administration. A sample bit on curriculum is the following: "Being elastic means being able to change shape under stress without becoming permanently deformed. This is what curriculum shapers have to keep in mind." Father Leary thinks that ideas for curricular change that "come down from above" are usually suspect. Change is likely to be impractical "unless the thinkers are actually in contact with and engaged in the problems."

He advances a similar view in respect to administration: "The picture of administrators far removed from the student, who is, after all, a central and pivotal factor in education, is not a healthy one." "It would probably be a good idea if every principal, superintendent, president and all their lieutenants made themselves teach at least one class for at least one term every year. Let others take some of the trips." The closing point is: "To administer means to serve." DMG

Educational Issues of the '60's

CURRENT ISSUES IN HIGHER EDUCATION edited by G. Kerry Smith. Washington, D. C.: National Education Association of the United States. 1960. ix + 287 pp. $5.00.

LAST MARCH the Association for Higher Education assembled its fifteenth national conference for a discussion of "Current Issues in Higher Education" with more than one hundred speakers besides moderators, chairmen, recorders, planning consultants, and staff members. The volume of proceedings, in paper cover, totals nearly three hundred pages, contains eighty pictures, is attractively printed, and makes good reading.

No attempt is made here to give a digest of the contents. Quotations from the addresses of the keynoters will indicate something of the quality of the speakers and their messages:

A. A. BERLE: "In the first and deepest issue, universities and American intellectuals have, I am clear, been running away from the greatest and most constant of all human issues. This is, quite simply, whether life has an enduring significance, or whether it is an anarchy of chance, meaning nothing. Properly, this should have been the concern of the departments of philosophy in our universities."

HOWARD R. BROWN: *"Efficiency in a college is something like efficiency in the home. In both cases we are rather more concerned about a quality of life than about the quantity of outputs. In a home, we do not worry about the fact that each room is not in use 24 hours a day. We are quite content to use the kitchen in the morning, the sun porch in the afternoon, the living room in the evening, and the bedroom at night. One must concede that a certain kind of efficiency would be achieved if all these rooms were combined into one which would be used 24 hours a day, as is apparently the custom in the Soviet Union. But who would call this efficiency in terms of the true objective of the family?"*

PETER F. DRUCKER: "I am concerned with the fact that our own faculties do not seem to realize that when they talk to their classroom at 9:00 a.m. in the morning, they are not just talking to a local class. They are talking to a group which within its effective lifetime will have to reach way out beyond any

boundaries it sees at its age, which will have to have an approach—not necessarily a great deal of knowledge—but at least a realization that there is knowledge, that there is something to be learned, to be understood, and that the contribution which they will be called upon to make will have to be based on an understanding of the needs, the values, the importance of the recipient if it is to be effective."

DORE SCHARY: *"Great men have always had a capacity for indignation. It is simply not enough to speak of brotherly love and then fail to express indignation when it is not practiced."*

SHANNON MCCUNE: "It is imperative that we make innovations which will strengthen rather than weaken our American system of higher education. We as an academic community need to make our own departures before departures are forced upon us by others. Every college faculty and administration needs to take responsibility on its own campus to plan for major objectives."

JOHN S. ALLEN: *"The idea of a community of scholars is a good one. But it is meaningless unless there be a community. Thus, we feel it is important to devise means that will cause students, professors, administration, business and clerical workers to feel they are a part of an exciting and worthwhile enterprise."*

D. B. VARNER: "Human beings resist the discomfort and loneliness of change. Will we push forward with and persist in our early dedication to bold new planning, or will we yield to the pressures of easy, comfortable, and above all, respectable comformity."

HAROLD TAYLOR: *"When we say we mean to educate all American youth, we mean just that and nothing less. All American youth are not the same; they vary in talent, motivation and interest; some of them are poor, others rich, some of them city boys, others from the country, some of them are quick to learn, others slow; some of them are boys, some are girls. The progressive idea is to build an education which takes account of who the children are and what they can become. If they are ignorant, what they need is knowledge, not exclusion from further education; if they have not yet learned to learn, if their environment has crushed their curiosity, if they are culturally undernourished, if their vocabulary is underdeveloped, what they need is teaching which is lively, vigorous, informed and productive; they need a chance to get started, not more hours of textbook material which they can't yet handle. If their test scores are low, what they need is a teacher who can find out why and can set about raising them, not someone who classifiies them as stupid on the basis of circumstantial evidence. If their teachers are incompetent what they need is better teaching, not a storm of rhetoric against American education."*

The larger portion of the volume is devoted to the answers to more than thirty questions on curriculum, campus climate, research, student values, policies, preparation of college teachers, government relations. The questions in themselves are stimulating to read. The answers could not be full or final, but were sincerely advanced by informed, intelligent, and competent men and women (three). In an extensive summary Dr. William E. Porter pointed out "some boulders above the sea of talk," concerned with: Research, Teaching, Students, Dissatisfaction, Values. DMG

Teaching the Experienced

ON TEACHING ADULTS: AN ANTHOLOGY edited by Marilyn V. Miller. Chicago, Illinois: The Center for the Study of Liberal Education for Adults. 1960. ix + 98 pp.

NEW DIRECTIONS FOR ALUMNI: CONTINUING EDUCATION FOR THE COLLEGE GRADUATE by Ernest E. McMahon. Chicago, Illinois: The Center for the Study of Liberal Education for Adults. 1960. viii + 52 pp.

THE EMERGING EVENING COLLEGE: A STUDY OF FACULTY ORGANIZATION AND ACADEMIC CONTROL IN TEN EASTERN UNIVERSITY EVENING COLLEGES by Ernest E. McMahon. New York: Bureau of Publications, Teachers College, Columbia University. 1960. xii + 163 pp. $4.50.

UNIVERSITY ADULT EDUCATION by Renee Petersen and William Petersen, A Project Planned and Directed by Warren Rovetch. New York: Harper & Brothers. 1960. xx + 288 pp. $5.50.

HOW TO INSTRUCT SUCCESSFULLY: MODERN TEACHING METHODS IN ADULT EDUCATION by Thomas F. Staton. New York: McGraw-Hill Book Company, Inc. 1960. 292 pp. $4.50.

THE MOST precious ingredient the adult brings to the classroom is experience. This is pointed out by Peter E. Siegle of the Center for the Study of Liberal Education for Adults which exists "to provide aid and leadership to the forces that can

develop the evening college and extension movement into a more effective instrument for the liberal education of adults." The Center has just issued a significant and excellent anthology on teaching adults containing eleven chapters by outstanding authors, "a compendium about teaching and learning as these relate specifically to adult students." That the experience which adults have provides the basis for adult education is emphasized:

> When the suggestion is made that adults should be taught "differently," a howl conventionally goes up that is superfluous discussion, for a good teacher is a good teacher is a good teacher, no matter the age of his students. While we agree that this is so, it is nonetheless true—and a fact emphasized frequently below in precisely these words—that adults have more experiences, of different kinds, and differently organized from those which non-adults accumulate.

The Center is co-sponsor with the American Alumni Council of a pamphlet "New Directions for Alumni." Both adult education and alumni relations "are concerned with adults whose formal education is completed. Both have suffered negative reputations on the ground that they have tended to put trivialities above substance; but both fields are winning new respect today." A twentieth century challenge is stated: "to help alumni replenish their intellectual reserves" as Hopkins urged, or "to retain the alumni within the college community" as Meiklejohn dreamed.

"The Emerging Evening College" presents case studies of ten evening colleges as to purpose, standards, institutional status, faculty, past and future. It emphasizes the importance of the evening college as a permanent factor in education. It points out a threat to evening programs which the "tidal wave" of undergraduates might cause: if facilities prove inadequate the college day might be extended into the evening and the space now available for adult evening programs be taken away. "In the future there will have to be joint planning for maximum utilization of the plant."

"University Adult Education" is a book broad in scope and substantial. It defines the functions of adult education to include (1) remedial, (2) vocational, (3) cultural, (4) political training and understanding. "The proper role of the university in adult education, no less than in any of its other activities, is to educate by standards appropriate to an institution of higher learning." The book is as concerned to indicate what university adult education should not provide as what it should. The bibliography is extensive. The section on cooperative extension and the land-grant system is notable. In his introduction, President Renne of Montana State College calls it "an important and a disturbing book."

College and university teachers in all disciplines may find extraordinary interest in the volume "How to Instruct Successfully." That is something we all want to know more about. The fact that the book is concerned especially with modern teaching methods in adult education is a recommendation, not a limitation. We all have much to learn from adult education and especially from teachers who have been successful in it. Teachers of adult classes have to deal effectively with their non-captive students or they simply do not have them. Our captive undergraduates, on the other hand, sometimes endure teaching of a quality that we could elevate if we tried. There is much in the spirit and practice of adult teaching that can stimulate us. We find several chapters on learning, a chapter on planning, chapters on lecture, demonstration-performance, group discussion, and role playing. We find "a system for conducting instruction," a chapter on instructional aids and one on preparing a classroom, one on tests and one on counseling. The chapter on broadening one's qualifications as an instructor may seem to be telling us how to do our job. It really isn't—it is made up of suggestions that at least some of us might show better judgment in taking than in leaving. "The author has drawn on his twenty years of experience as an instructor, a supervisor of instructors, and a student of educational and psychological literature to write this book in a straightforward and uncomplicated manner." DMG

Clearinghouse and Reporter

SPECIAL REPORTS by Winslow R. Hatch (editor). Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, Clearinghouse of Studies on Higher Education. March 1959. vii + 59 pp. 40¢.

REPORTER by Winslow R. Hatch (editor). Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, Clearinghouse of Studies on Higher Education. March 1959. ix + 78 pp. 50¢.

REPORTER by Winslow R. Hatch and Ann Bennet. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, Clearinghouse of Studies on Higher Education. March 1960. viii + 55 pp. 40¢.

SPECIAL REPORTS by I. Owen Foster, Lanora G. Lewis, and Winslow R. Hatch. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, Clearinghouse of Studies on Higher Education. April 1960. vii + 61 pp. 40¢.

REPORTER by Winslow R. Hatch and Ann Bennet. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education, Clearinghouse of Studies in Higher Education. September 1960. v + 89 pp. 60¢.

INDEPENDENT STUDY by Winslow R. Hatch and Ann Bennet. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education. New Dimensions in Higher Education, Number 1. 1960. v + 36 pp. 25¢.

EFFECTIVENESS IN TEACHING by Winslow R. Hatch and Ann Bennet. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education. New Dimensions in Higher Education, Number 2. 1960. v + 28 pp. 20¢.

THE EXPERIMENTAL COLLEGE by Winslow R. Hatch. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education. New Dimensions in Higher Education, Number 3. 1960. iii + 13 pp. 15¢.

MANAGEMENT OF LEARNING by E. D. Duryea. Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education. New Dimensions in Higher Education, Number 5. 1960. v + 37 pp. 20¢.

IT IS gratifying to extend some glimpses of the reservoir that is now made available in the Clearinghouse of higher education studies in the U. S. Office of Education. The primary emphasis of the Clearinghouse, according to Dr. Homer D. Babbidge, Jr., Assistant Commissioner for Higher Education, is upon studies which fall under the rubric of "institutional research." Many institutions use the Clearinghouse for reporting their own studies and sharing those of others. Annotated listings of the studies are published in REPORTER. Digests of research concerned with particular problems or practices are assembled in CASE BOOK for easy reference by other institutions. Summaries of studies that are broader in scope, concerned with theory as well as practice, and may involve several institutions, are included in SPECIAL REPORTS. The series NEW DIMENSIONS IN HIGHER EDUCATION summarizes research and opinion on subjects of broad interest and timeliness.

The first two "Special Reports" contain a total of twenty-seven articles, two of which are multiple. Among the topics are: Faculty Evaluation, Study Abroad, Discussion Method, Identification of Creative Talent, Student Values, Academic Freedom. Especially notable is "Problems in College Administration" by A. J. Brumbaugh.

"The Reporter" in its two issues lists and annotates between one and two thousand reports, many being progress reports and some final, in twenty-five different categories. The studies in most cases can be obtained without cost by contacting the institutional representative concerned; for some there is a charge. In the category of Teaching each issue lists nearly a hundred reports. Examples: Use of Films to Replace Laboratory, Does Teaching Change Students' Attitudes?, Television Teaching, Teaching Creative Thinking, Non-Traditional Types of Instruction, Student Achievement. The more recent issue lists studies ranging from "Personality and Interest measures as Related to Criteria of Instructor Effectiveness" (Air Force Personnel and Training Research Center) to "The Order of Presentation in Persuasion" (Yale University Press).

In the New Dimensions series each pamphlet reports on a specific educational problem. In the one on "Independent Study" not only honors programs but Socratic, problem, case methods, student research, and administrative curricular practices that introduce flexibility into academic programs and so provide opportunity for independent study are included. Highlight statements: "Independent study has proven to be as good as traditional methods but it has not realized its potential because it has not been developed in a sophisticated context. If this is not done, independent study could fall into disrepute." "The trend is (a) to make independent study available to more, if not most, students; (b) to begin such programs in the freshman year." "The use of independent study should not be viewed as a substitute for teaching: independent study makes great demands upon a teacher's scholarship and upon his skill as a *director of learning.*"

Highlights of "Effectiveness in Teaching" are: "The critical factor is not class size as such; it is rather the nature of the teaching as it affects learning. There is little likelihood of discovering some one general method that is clearly more effective than others. Problem oriented approaches to learning are effective; inquiry by students and teachers is a promising way of life that should be examined for its pedagogical and curricular implications. Directed learning, which is the essence of the teacher's role in inquiry, is effective teaching."

The study of "the Experimental College" in-

cludes programs and projects of colleges not usually thought of as experimental. The several aspects of experimental colleges are taken up item by item, hypothesis by hypothesis. Citing competent pronouncements that experimentation and reform are called for, it is indicated that new experimental colleges appear to be in order when there appears little chance for change in an established college. Independent study is being used in many experimental programs. "A new concept of faculty is emerging that emphasizes broader patterns of organization and scholarship and draws upon more of the resources of the faculty in order to realize stated objectives." "Administrators responsible for academic leadership are being released from routine activities in order to provide that leadership." "New techniques of personnel management, particularly as they affect teaching load, salary, rank, and tenure, are being examined."

The purpose of the report on "Management of Learning" is to indicate the areas of academic administration with which current thinking is concerned and to suggest a conceptual scheme reflecting those areas. "The task of organizing people is defined here as management. It connotes leadership and coordination in the broadest sense, not 'managing' in the specific sense." A bibliography of forty items, an appendix listing twelve doctoral theses, and an appendix listing sixteen cooperating institutions suggest the background of the study which presents its findings under three categories: (1) theories of administration; (2) analysis of process, structure, and institutional setting; (3) application or operation. Strong emphasis is placed upon the need for continuing study of administration in the face of demands on our institutions by our own and other changing cultures. DMG

Impact of College

ACHIEVEMENT IN THE COLLEGE YEARS edited by Lois B. Murphy and Esther Raushenbush. New York: Harper & Brothers. 1960. viii + 240 pp. $4.95.

IMPACT OF COLLEGE by Mervin B. Freeman, Washington, D. C.: U. S. Department of Health, Education, and Welfare, Office of Education. New Dimensions in Higher Education, Number 4. 1960. iii + 27 pp. 15¢.

WHEN a student emerges from four years in college, he possesses knowledge, skills, appreciations, attitudes, habits, and other tangibles and intangibles which we like to point to as the fruits of the college years. He always has some deplorable imperfections, too. An evaluation of educational outcomes unfortunately is not merely a cataloging of the efficiency of the graduate. It must take into account the fact that a young person in the years from eighteen to twenty-two would have changed both positively and negatively in important ways even though he had not gone to college at all.

When we come upon studies of college outcomes, therefore, we must not expect too much. We must realize the tremendous difficulties involved in the determination. Another contribution from the Clearinghouse of Studies in Higher Education of the U. S. Office of Education is concerned with the impact of college. It includes first a brief history of research in the social sciences and higher education, a report of research findings as to the characteristics of the entering student, changes in student characteristics during the college years, and the college as an institution with emphasis on student culture and characteristics of faculty and teaching. The highlights of the research are succinctly presented:

1 Compared with freshmen, seniors generally have greater knowledge of their cultural heritage; more cultivated tastes and interests; increased attitudes of skepticism and criticism; but also increased tolerance, differentiation, and mastery of control. On the other hand, seniors evidence decreased authoritarianism and conventionality; decreased stereotypy in perception of roles; and decreased stability, possibly because of impending entrance into a life of broadened responsibilities.

2 Critical thinking ability and changes in attitudes and values are usually caught rather than taught. Student culture and teacher personality play more important roles than specific attempts to teach critical thinking techniques.

3 Throughout their later life the outlooks of those who have attended college tend to correspond closely to the student culture of which they were a part and the "ethos" of the times of their college years.

4 Although assimilation into the student society is the foremost concern of most new students, the student body as an entity possesses characteristic qualities of personality, ways of interacting socially, and types of values and beliefs, which are passed on from one "generation" of students to another and provide a basic context in which individual learning takes place.

The student culture in the college is the prime educational force at work in the development of attitudes and values, it is improved by the personal and interpersonal development of individual students during their student years, and is radiated into society as "a continuous reflection of the impact of their attendance at a college of their choice."

We now have a report of a study at Sarah Lawrence College of a group of students during four years of college and two years beyond. The group included many kinds of students: the gifted; those who first become aware of what learning means when they reach college and then take long, sudden strides; those who take a long time to grow up and work well; those who function by fits and starts; and some who, while passing all their courses, seem unable to make anything important out of their college experience. Chapters by Harold Taylor and Esther Raushenbush describing the purposes, program, and "climate" of Sarah Lawrence College are followed by the contributions of five other authors on: the college experience through the eyes of the students, the students' experience of growth, personality dynamics and intellectual achievement, vocational orientation and growth, and the development of intellectual qualities through the college years. The concluding summary chapter reports evidence of gratifying impact of college on students:

- "Typical students are acutely conscious that their intellectual accomplishment is important."
- "There are dramatic indications of the effort of these young people to deal with the need both for dependence on and independence from their families."
- "The students fall into three groups—those who are strongly career-minded; those who have throughout college, or come to have, an interest in working in some field, although without the career drive of the first group; and those who have no interest at all in planning for work. There is no noticeable difference in intellectual capacity among the three groups—the differences are of interest and drive, not ability."
- Four kinds of students are recognized: "pre-college maturers," "college maturers," "late maturers," and "the unresolved."
- "If growth or change is an avowed purpose of the college, it cannot merely hope for desired outcomes, but must organize itself to promote them."
- "There is no doubt that the most important single factor is the attitude of teachers toward education."
- The college "needs to learn which are the 'interests' in which a student is willing and able to make an investment, and of these which develop and deepen, and which do not."

The concluding statement is that, while the college cannot give students growth capacities they do not have, it can encourage such qualities. "More important, for purposes of teaching, we can learn which qualities seem to forward education and which seem to hinder." DMG

Other New Books

AUTOCRACY AND DEMOCRACY by Ralph K. White and Roland O. Lippitt. New York: Harper & Brothers. 1960. x + 330 pp. $6.00.

A notable report of twenty years of research growing out of that of the late Kurt Lewin on "the fruition of democracy as a way of organizing personal and collective life." Experiments, interpretation of group findings, individuals, implications. Bibliography of 14 pp.

CAREERS IN EDUCATION by Frederick L. Redefer and Dorothy Reeves. New York: Harper & Brothers. 1960. xi + 209. pp. $4.00.

Written for those who plan to teach as well as for the experienced, for administrators, those who plan to teach in college or wish another college position. Eight practical chapters and a bibliography of 57 items.

THE COMMUNITY JUNIOR COLLEGE by James W. Thornton, Jr. New York: John Wiley & Sons, Inc. 1960. vii + 300 pp. $5.95.

Community college in relation to American education. Four recognized fields: preparation for senior college, occupational curricula, adult education, community services. Predicts that within a few years many public junior colleges will become true community colleges. Bibliography of 215 items.

CURRICULUM BUILDING IN GENERAL EDUCATION edited by Edward A. Carlin and Edward B. Blackman. Dubuque, Iowa: Wm. C. Brown Company. 1960. ix + 133 pp. $3.75.

Curricular revision in each of the four areas of study that form the program of the Basic College of Michigan State University. "While the need for strong programs in general education is increasing, the forces that may undermine them are gathering strength at an even faster rate."

EDUCATION IN AMERICA by James Monroe Hughes. Evanston, Illinois: Row, Peterson and Company. 1960. xiii + 496 pp. $6.00.

Comprehensive description of all that makes up American education through the high school. Brief mention of junior college and state university. "The educational ladder in the American public school system constitutes a continuous chain of instruction from the kindergarten through the most advanced training given by the universities."

EDUCATION AND THE HUMAN QUEST by Herbert A. Thelen. New York: Harper & Brothers. 1960. 224 pp. $4.75.

A program for drastic overhauling of educational plan and process. "Changes to education and action are actually brought about by somebody doing something different." "To teach inquiry will mean changing the way teachers teach." "Action is the operational aspect of inquiry."

AN ELEMENTARY COURSE IN STATISTICS, TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION by N. P. Neilson. Palo Alto, California: National Texts. 1960. 68 pp. $2.00.

Intended to serve as a guide for instructor and class members in the intelligent use of the selected references and bibliography.

FREUD AND DEWEY ON THE NATURE OF MAN by Morton Levitt. New York: Philosophical Library, Inc. 1960. 180 pp. $3.75.

"Freud's system was based upon the same organic wholeness as Dewey's." "Each man's experience led him to emphasize the opposite element in a relatively fixed position." "The apparent distinction evaporates, and the two men sound much like each other." "Both contributed mightily to a deeper view of human behavior."

FROM ATOMS TO STARS: An Introduction to the Physical Sciences by Theodore A. Ashford. New York: Henry Holt and Company. 1960. ix + 645 pp. $8.50.

A textbook to give an understanding of the physical world as conceived by scientists of our time. Addressed to students whose primary interest is other than science. Fifteen chapters. Notable illustrations. Extensive references.

GENERAL EDUCATION FOR PERSONAL MATURITY by Horace T. Morse and Paul L. Dressel. Dubuque, Iowa: Wm. C. Brown Company. 1960. x + 244 pp. $4.50.

Role of courses in personal adjustment, preparation for marriage, and vocational planning. Symposium by a score of authors. Opening chapter "The Quest for Maturity" by Russell M. Cooper.

THE GOALS OF HIGHER EDUCATION edited by Willis D. Weatherford, Jr. Cambridge, Massachusetts: Harvard University Press. 1960. 122 pp. $3.50.

Lectures at Swarthmore College by Harold Taylor, Jacob Kleim, Richard Sullivan, Gordon Allport, Brand Blanshard, Arthur Morgan. Current questions in higher education "can be satisfactorily answered only as we gain an adequate idea of the goals of education."

GRADUATE EDUCATION IN THE UNITED STATES by Bernard Berelson. New York: McGraw-Hill Book Company, Inc. 1960. vi + 346 pp. $6.95.

Historical background, purposes, institutions, students, programs. Extensive study drawn from the literature, interviews, meetings, visitations, consultations, and five sets of questionnaires. Nineteen recommendations.

GROUP DYNAMICS—RESEARCH AND THEORY edited by Dorwin Cartwright and Alvin Zander. Second edition. Evanston, Illinois and Elmsford, New York: Row, Peterson and Company. 1960. xii + 826 pp. $7.25.

Second edition of a ponderous volume of forty-two chapters. "Group dynamics is a field of inquiry dedicated to advancing knowledge about the nature of groups, the laws of their development, and their interrelations with individuals, other groups, and larger institutions." (College classes, of course, are groups.)

HIGHER EDUCATION IN THE UNITED STATES: The Economic Problems. Edited by Seymour E. Harris, Richard M. Cooper, Reginald H. Green, and Elisabeth Humez. Cambridge, Massachusetts: Harvard University Press. 1960. 252 pp. $5.50.

A seminar on higher education at Harvard under Ford Foundation support brought together a brilliant group whose contributions are recorded in an excellent volume. The economic problems of today: tuition rates, government aid, faculty status, experiments in higher education, economics and educational values, investment and endowment policies.

INTEGRATED TEACHING MATERIALS by R. Murray Thomas and Sherwin G. Swartout. New York: Longmans, Green and Company, Inc. 1960. xiii + 545 pp. $6.75.

How to choose, create, and use integrated teaching materials: reading or text materials, photographed materials, drawn and printed graphic materials, broadcast and recorded materials, constructed materials, real life materials. Displaying and administering materials.

INTERCOLLEGIATE BIBLIOGRAPHY: CASES IN BUSINESS ADMINISTRATION by Grace V. Lindfors. Boston: Intercollegiate Case Clearing House. 1960. xiv + 115 pp.

The Intercollegiate Bibliography and the Clearing House for Case Materials are products of collaboration by the American Association of Collegiate Schools of Business, the Ford Foundation, and the Harvard Graduate School of Business Administration.

THE JUNIOR COLLEGE: PROGRESS AND PROSPECT by Leland L. Medsker. New York: McGraw-Hill Book Company, Inc. 1960. xiv + 367 pp. $6.50.

A study involving cooperation of 75 two-year colleges. Nature and purposes, students, program, developments in various states, next ten years. "It will soon be a hundred years since the two-year college was conceived. There were realistic expectations that have been fulfilled, and there were also overexpectations. The next ten years will sharpen and identify whatever roles it will have in the future."

MECHANISMS OF COLOUR DISCRIMINATION edited by Yves Galifret. New York: Pergamon Press. 1960. viii + 296 pp. $9.50.

Proceedings of an international symposium in Paris sponsored by the International Council of Scientific Unions. Leading zoologists, biochemists, neuro-physiologists, psychophysicians, and psychologists from twelve countries examined critically the results obtained to date on the problems of chromatic discrimination in animals and man. Contributions are in various languages including English. Many charts.

THE ONGOING STATE UNIVERSITY by James Lewis Morrill. Minneapolis: The University of Minnesota Press. 1960. 143 pp. $3.50.

The retiring president of the University of Minnesota discusses the land grant idea, academic freedom, religion in a state university, athletics, public relations, alumni, responsibility of the state, higher education and the federal government. "The commitment is to instruct those youth who can, and are determined to, benefit from instruction —not just 'certain youth' or even the most brilliant youth alone."

THE OVERSEAS AMERICANS by Harlan Cleveland, Gerard J. Mangone, and John Clarke Adams. New York: McGraw-Hill Book Company, Inc. 1960. xv + 316 pp. $5.95.

A study under a Carnegie corporation grant led authors "not only to question several widely held ideas about education for international responsibility but also to suggest that certain lines of educational policy need immediate attention." Educated persons who will work in foreign countries need preparatory immersion in an alien culture, improved area and professional preparation pointed to needs, comparative study of political and administrative process, better teaching of philosophic bases of American life.

PATTERNS OF PROFESSIONAL EDUCATION by William J. McGlothlin, New York: G. P. Putnam's Sons. 1960. xviii + 288 pp. $6.75.

Comparative study of ten fields: architecture, business, engineering, law, medicine, nursing, psychology, social work, teaching, veterinary medicine. Purpose is to reveal the light on preparation for each profession which is obtained by comparative study.

PSYCHOLOGY FOR EFFECTIVE TEACHING by George J. Mouly. New York: Henry Holt and Company. 1960. xviii + 545 pp. $5.50.

A packed volume on the psychological aspects of teaching intended to prepare the public school teacher to know his pupils and effectively teach them. Many a college or university teacher looking through this book might wish to have the same kind of knowledge of his students and his teaching.

A SOCIOLOGICAL APPROACH TO EDUCATION by Lloyd Allen Cook and Elaine Forsyth Cook. New York: McGraw-Hill Book Company, Inc. 1960. ix + 371 pp. $6.75.

Seeks to lay a foundation—sociological, anthropological, and psychological—for relating education to the American scene of today, child acculturation and the role of the school, the healthy public school. Atmosphere of book is practical and concrete intended for students but worthy of examination by any professor wishing a glimpse of the current scene.

THE TEACHING OF SECONDARY MATHEMATICS by Charles H. Butler and F. Lynwood Wren. New York: McGraw-Hill Book Company, Inc. 1960. ix + 624 pp. $7.50.

Second edition. Contemporary thought respecting the program in secondary mathematics with chapters on the teaching of arithmetic, algebra, geometry, trigonometry, analytic geometry, calculus.

TEACHING TIPS by Wilbert McKeachie. Ann Arbor, Michigan: The George Wahr Publishing Company. 1960. 194 pp. $2.00.

Fourth edition including extensive revisions of a book which abounds in pratical help for the college and university teacher together with a discerning interpretation of his job. This unpretentious but excellent paper book can hardly be too strongly commended.

THE UNIVERSITY AND WORLD AFFAIRS. Report of Committee on the University and World Affairs. New York: The Ford Foundation. 1961. v + 84 pp.

Findings and recommendations of an ad hoc committee including Harold Boeschenstein, Harvie Branscomb, Arthur S. Flemming, J. W. Fulbright, John W. Gardner, Franklin D. Murphy, Philip D. Reed, Dean Rusk, and J. L. Morrill (chairman).

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Articles by the Vice President of the Ford Foundation, two college Presidents, and other leaders in higher education will make the Spring issue a distinguished one. "Some Expendable Shibboleths" by A. C. Eurich and "The High Calling of College Teaching" by James L. Jarrett will be followed by articles by W. C. Korfmacher and A. M. Withers, and eight articles on the College Student: "Student Intelligence and Integrity" by C. W. Hovland, Oregon State College; "The Intellectual Experience of Freshmen" by Paul Douglass Rollins College; "Some Student Comparisons" by D. W. Norton and R. F. Link, Oregon State College; "The Burning Desire to Learn" by W. W. Ludeman, Southern State Teachers College; "The Study Activity of Students" by R. N. Ballard, Knox College; "Freshman Disorientation" by C. W. Hobart, University of Redlands; "The Student Cheater" by Evelyn Shirk and R. W. Hoffman, Hofstra College; "Understanding the Learner" by F. L. Parks, Oregon State College. Editorial: "Person to Person."

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